"Bradshawe" Lecture

ON THE

PATHOLOGICAL RELATIONS OF THE ABSORBENT SYSTEM.

Delivered before the Royal College of Physicians of London, August 18th, 1884,

BY G. HARE PHILIPSON, M.A., M.D., D.C.L.,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, PROFESSOR OF MEDICINE IN THE UNIVERSITY OF DURHAM, SENIOR PHYSICIAN TO THE NEWCASTLE-UPON-TYNE INFIRMARY, ETC.

MR. PRESIDENT, FELLOWS, AND GENTLEMEN, — The occasion of the present assembly of this College is for the delivery of the fourth Bradshawe Lecture. By the munificence of the widow of William Wood Bradshawe, of Andover and Reading, a Member of this College, a Master of Arts and a Doctor of Civil Law of the University of Oxford, a sum of money was bequeathed whereby a lecture might be delivered at this College annually, with the object of perpetuating the memory of her husband, it being stipulated that the subject of the lecture should have a bearing upon some question of medicine, and that the lecture should be delivered upon the 18th day of August, the anniversary of his death. The munificence of the benefactress and generous founder is well deserving of an expression of respectful and appreciative commendation, in that, while endeavouring to preserve the name of a loving husband, she was actuated with the laudatory idea of associating such with a formal discourse for the advancement of the profession to which he was devoted and which he adorned. This home-loving, studious, and scholarly man, who diligently cultivated his mind in literature and science, may therefore be fittingly extolled as an example for others to follow. His name will be justly venerated and transmitted in good repute, as well as that of his generous and devoted widow.

In undertaking the important duty that has been entrusted to me, I feel the honour and estimate the responsibility of the position. It shall be my earnest endeavour to justify the choice of our revered President, to whom I beg to offer my grateful acknowledgments for this distinctive mark of his favour.

I have selected the Pathological Relations of the Absorbent System as the title of the lecture. The absorbent system occupies a prominent place in relation to several important pathological processes and conditions, and is at the present time receiving considerable attention from histologists and pathologists. As illustrations of these relationships, it may be mentioned that this system is undoubtedly concerned in many septic conditions, and the late Messenger Bradley classified glanders, malignant pustule, snake-bite, dissection wounds, and erysipelas as forms of septic lymphangitis. Moreover, it is supposed to play an important part in relation to various zymotic diseases, such as plague, typhus and typhoid fevers, and diphtheria. The serous cavities are also now regarded as parts of the lymphatic system, and some cases of inflammation of serous membranes, for instance, of puerperal peritonitis are considered as being due to lymphangitis. Again, the absorbents are concerned in conveying to various parts of the body morbid products, such as those of cancer, syphilis, and tubercle, and thus of disseminating these diseases through the system. Again, they are often involved in connexion with diseases of internal organs. Some structures consist mainly of lymph-follicles and their chief diseases are associated with these follicles. Certain skin diseases, such as erythema, have been attributed to inflammation of lymph rootlets, and changes in the lymphatics seem to constitute an important element in the morbid anatomy of elephantiasis and several other affections. These illustrations will suffice to show the importance of the pathological relations of the absorbent system, and justify the selection of this subject for this commemorative lecture.

As an introduction to the consideration, it will be fitting that a short reference should be made to the anatomy and physiology of the absorbent system; for, without such a statement the pathological changes or the departures from the healthy state to those of disease could not be indicated with the same precision and comparative exactitude as this method will ensure. Having in regard, also, that physiology in its true acceptation is the science which treats of the conditions, phenomena, and laws of the life of the human body in the state of health, while pathology comprises the departures from such, manifested to the observer in disease, this process commends itself as the right and true way for this dissertation to be conducted.

The lymphatic and the lacteal systems together constitute the absorbent system. There is no essential difference between the two systems. The process of absorption has for one of its objects the introduction into the blood of fresh materials from the food and air, and of whatever comes into contact with the external or internal surfaces of the body; and, for another, the gradual taking away of parts of the body itself, when they need to be renewed. In both these offices, absorption from without and absorption from within, the process manifests some variety and a very wide range of action, and in both two sets of vessels are, or may be, concerned — namely, the bloodvessels and the absorbents. The lymphatic system may, therefore, be considered as an appendage of or supplementary to the blood-vascular system; the materials which they take up being, in fact, merely the spare nutrient substances forced into the intertextural spaces—that is, the commencement of the lymphatics—by the continued exudation of fresh fluid from the capillaries.[1] The lymphatics never come quite close to the surface of the dermis, but the blood capillaries are superimposed upon them (Teichmann and Belajeff). The lymphatic system consists of vessels, both trunks and capillaries, and of collections of a peculiar kind of connective tissue, adenoid, the meshes of which are crowded with round colourless cells. When these are situated in the course of the lymphatic vessels and are invested with a capsule, they are termed lymphatic glands; but if there is a mere reticulum enclosing the cells, and so forming a patch in the submucous or subserous tissue, it is described as a lymph follicle. Around all such follicles there is a large plexus of lymph capillaries.[2] The principal vessels of the lymphatic system are, in structure and general appearance, like very small and thin-walled veins, and, like them, are provided with valves. By one extremity they commence by fine microscopic branches, the lymphatic capillaries or lymph capillaries, in the organs and tissues of nearly every part of the body; and by their other extremity they end directly or indirectly in two trunks, which open into the large veins near the heart. Their contents pass only in one direction, from the finer branches to the trunks, and so to the large veins, on entering which they are mingled with the stream of blood, and form part of its constituents. The lymphatic capillaries commence most commonly either in closely-meshed networks or in irregular lacunar spaces, between the various structures of which the different organs are compounded. They are composed of a single layer of flattened cells, nearly equal in length and breadth, with a marked sinuous outline. When passing into the large lymphatic vessels they present a varicose appearance, from an incomplete valvular appearance in their interior. In the extremities the lymphatic vessels are divided into superficial and deep. The superficial anastomose freely with one another, and so do the deep, but there is no communication between the two sets, except in the glands, which may be common to both. To this is due the remarkable circumstance that either set may be separately diseased, and that superficial and deep lymphangitis may be spoken of as distinct affections, although inflammation spreads from one group to the other. The mode of anastomosis is peculiar. A lymphatic vessel will run for a certain distance parallel to two other vessels, and then divide; it may join both of them, or one of the branches will continue onwards, and the other run into an adjacent vessel. In this manner a plexus with large meshes is formed. The rapidity with which inflammation spreads from vessel to vessel is thus easily explained.

In certain parts of the body openings exist by which lymphatic capillaries directly communicate with parts hitherto supposed to be closed cavities. These openings have a roundish outline, never exceed the size of an epithelial cell, and have been termed "stomata." An absorption into the lymphatic system also takes place in the membranes covered

[1] Broadbent: Humphry and Turner's Journal of Anatomy and Physiology, vol. i., 1870, p. 14.

[2] Curnow: THE LANCET, vol. i., 1879, p. 397.

by epithelium or endothelium, through the interstitial or intercellular cement substance, and not through the cells themselves. This mode of absorption may be said to take place through pseudo-stomata. Stomata have been found in the pleura; and, as they may be presumed to exist in other serous membranes, it would seem as if the serous cavities, hitherto supposed closed, form part of a large lymph sinus, or widening out, so to speak, of the lymph capillary system, with which they directly communicate.

The current of lymph is much aided by the valvular mechanism. All occasional pressure on the exterior of the lymphatic and lacteal vessels propels the lymph towards the heart. Muscular and other external pressure accelerates the flow of the lymph, as it does that of the blood in the veins. The actions of the muscular fibres of the small intestine, and probably the layer of organic muscle present in each interstitial villus, seem to assist in propelling the chyle. For the general propulsion of the lymph and chyle, it is probable that, together with the *vis a tergo* resulting from absorption and from external pressure, some of the force may be derived from the contractility of the vessels. The respiratory movements also favour the current of lymph through the thoracic duct as they do the current of blood in the thoracic veins.[3]

Blood and lymph are the essential juices of the body. They stand in the closest relation to the vital processes which go on in the tissues. By means of the blood the constituent elements of the body are supplied with the nutrient substances and the oxygen which they require. By the blood and the lymph are conveyed away the waste and surplus matters which have ceased to be useful to the tissues. The nutrient substances and the oxygen are derived from without. The former usually enter the body from the alimentary canal, the latter usually through the lungs. But most parts of the body are, under certain conditions, capable of directly assimilating both nutriment and oxygen. The channels of entrance are in such cases the smaller bloodvessels and lymphatics. The matters which have to be removed from the tissues are partly surplus nutriment, partly the products of tissue waste and metabolism. These matters are carried off either to be utilised elsewhere within the system, or to be ejected altogether. Under normal conditions the incomings and outgoings balance each other in amount. The channels by which the normal constituents gain access to the blood and lymph may also serve to admit matters which are noxious, or at least abnormal. These matters may be either wholly extraneous or produced within the body itself in virtue of some morbid or abnormal metabolism. The result of their admission is a more or less enduring pollution of the blood and lymph. In many cases the blood is able to eliminate them harmlessly and speedily, chiefly by means of the kidneys and the liver, but in other cases the pollution is more permanent. The composition of the blood often suffers in consequence, and its renovation may not be effected until some of the tissues or organs have been more or less injured by malnutrition.[4] The lymph is merely the liquid transuded from the bloodvessels, together with certain products of tissue metabolism and certain matters taken up by the lacteals from the outside. To this the lymphatic glands contribute a number of lymphoid elements, in addition to the few cells derived from the blood. The sources of the lymph being thus somewhat various, it may be expected that morbid changes in the composition will not be uncommon. Changes in the blood and disorders of the tissues generally give rise to changes in the lymph, and the various impurities of the blood are all of them apt to pass into the lymphatic system on leaving the bloodvessels.[5]

With this narration of the anatomy and physiology of the absorbent system, we are in a position to enter upon the disquisition of its pathological relations. The anomalies in the distribution of the lymph will first receive attention. Every change in the circulation which determines an increased transudation of liquid from the blood leads by consequence to an increased saturation of the tissues. This increased saturation is generally balanced by an increased discharge through the lymph channels. But this compensating action has its limits. If the transudation from the bloodvessels still increases, there at last comes a time when the saturation of the tissues with liquid can no longer be kept down, and so it rises above the normal degree. The condition in which fluid collects in the substance of the tissues is called œdema; when in the greater cavities of the body, hydrops or dropsy. The liquid transudation in œdema and dropsy has never the same composition as blood-plasma; it is always markedly poorer in albumen. Three varieties of œdema may be distinguished according to their mode of origin; these are the œdema of engorgement, inflammatory œdema, and hydræmic œdema.

The œdema of engorgement, as the name implies, depends upon a disturbance of the circulation. If from any cause the outflow of blood from the veins is hindered, the blood tends to accumulate in the capillaries and venules. If the degree of obstruction exceeds a certain limit, the plasma seeks a lateral exit and escapes from the vessels. The amount of liquid thus escaping is proportionate to the discrepancy existing between the inflow and the outflow. The escaped liquid is always poor in albumen, poorer even than the normal lymph; it contains, however, a certain proportion of red-blood cells, depending on the intensity of the engorgement. The immediate consequence of increased transudation is an increased flow through the lymphatics. Often enough this may be quite sufficient to convey away all the liquid which escapes. If it is insufficient, the liquid collects in the tissues and the result is œdema or dropsy. Obstruction to the outflow through the lymphatics does not usually bring about œdema; direct experiments have demonstrated this. In the first place, the lymphatics of most parts of the body possess ample anastomoses, so that it is not easy for a stagnation of the lymph to occur. Even when the thoracic duct is occluded, collateral channels may be opened up and the circulation restored. Furthermore, when in a limb, for example, the whole of the lymphatic outlets have been closed, if no more than the normal amount of transudation from the bloodvessels goes on; no œdema is produced. The bloodvessels themselves have the power of taking up again the lymph they have produced. If the thoracic duct be completely occluded and no collaterals are opened up, then œdema is the result; it takes the form of ascites. At the same time the larger lymphatics become greatly distended with accumulated lymph. Though lymphatic engorgement alone is inadequate to produce œdema, it may possibly increase an œdema which has already been produced by increased transudation from the bloodvessels. The quantity and the nature of the liquid which escapes from the capillaries and veins depend not only on the intravascular pressure and the resistance of the flow, but also to a great extent on the character and condition of the vessel wall. Alterations in the amount of transudation may thus be referable, not to disturbance of the circulation, but to changes in the vessel wall, and especially in their endothelial lining. The vessel wall may, in fact, be made more permeable for the corpuscles as well as for the liquid constituents of the blood by various causes; one of these is long-standing engorgement, involving incomplete renewal of the blood-supply to the vessel. More serious causes of injury are persistent ischæmia, imperfect oxygenation, chemical changes in the blood, very high or very low temperatures, and traumatic lesions. What the exact injuries are which these bring about we are not as yet able to say, but it may fairly be imagined that they amount to a loosening of the connexions between the endothelial cells of the intima. It is in virtue of such alterations in the vessels that inflammatory and hydræmic œdema are produced.

As regards inflammatory œdema, no doubt can exist that it originates in some vascular change. It occurs as an independent affection, in the form of a more or less local and circumscribed swelling with dropsical effusion; but it may also, as a secondary phenomenon, accompany other processes, like severe inflammation. In the latter case it is often characterised as collateral œdema. Inflammatory œdema is distinguished from the œdema of engorgement by the fact that in the former the exudation is very much richer in albumen and white blood cells. It is also common for coagulation to take place in the dropsical tissues.

Hydræmic or cachectic œdema is very near akin to inflammatory œdema. It was formerly believed that hydræmia, in which the blood is impoverished of its solid constituents, and hydræmic plethora, or over-dilution of the blood with water, might directly give rise to increased transudation from the vessels. It was conceived that the vessel wall acted like other animal membranes, through which liquids poor in albumen filter more readily than liquids rich in albumen. This is incorrect. Cohnheim has shown that the vessel wall is not to be regarded as a dead membrane, but as a living organ. When hydræmia is artificially produced it

[3] Kirkes' Physiology, p. 302.
[4] Zeigler: Macalister's Translation, part ii., p. 1. [5] Ibid., part ii., p. 33.

is not followed by œdema. Even hydræmic plethora produced by over-filling of the vessels with diluted blood, though it leads to increased transudation, does not do so till the dilution has been carried to an extreme degree. Even then the œdema does not make its appearance at the parts which are the usual seat of hydræmic œdema in man. We must therefore look for another explanation of the œdema of cachexia and of nephritis, in which disease the function of the kidneys is disturbed. According to Cohnheim they owe their origin to a change in the vessel wall. This change is due to the watery character of the blood, or to some deleterious substance circulating in it. Hydræmic œdema is akin to inflammatory œdema, but it is not identical with it. This appears from the fact already alluded to, that the liquid effused in the former is much poorer in albumen than that in the latter, and that it contains considerably fewer of the corpuscular elements.[6]

As to the diffusion of diseases by the lymphatics. The granulative formations are all distinguished by similar characters. Their development usually stops short at the fibro-blast stage, and having reached it, or even before that, the constructive process gives place to retrogressive changes. Cicatricial development being arrested, the granulation tissue persists for a time unmodified, and often develops to a considerable amount. For this reason Virchow described the formations as granulative growths or granulomata. All of these growths have, furthermore, the clinical character of infectiveness. Hence they have been termed "infective growths" by Klebs and Cohnheim, and "specific inflammations" by Rindfleish. Their infective character may be recognised by various signs. Thus they are all locally invasive—that is, the granulation tissue spreads centrifugally from a centre into the surrounding structures. At the same time the central or oldest part of the new formation usually dies and disintegrates. In many cases the lymphatic system becomes affected, so that secondary granulative foci are formed in it. From the lymphatics the process is at times transferred to the blood, or it may invade the bloodvessels directly. The final result is the spread of the disorder to various organs, or throughout the system.

In most of the granulomatous disorders, we may have not merely a diffusion of the disease throughout the individual organism, but also a transference of it from one individual to another. The affection is inoculable. If one person be inoculated with the inflammatory products derived from another, he acquires a disease whose course is exactly similar to that of the original one, and which yields identical inflammatory products. This latter character of infectiveness is that by which it is most readily recognised. To this group of infective granulomata belong the neoplastic formations found in tuberculosis, syphilis, leprosy, lupus, glanders, and actinomycosis. All these affections are due to the invasion of the body by a virus or poison derived from the outer world or from the body of another individual. This virus may probably be produced by vegetable parasites. In leprosy (Hansen, Neisser), tuberculosis (Koch), and syphilis (Klebs), bacteria have been found, and in actinomycosis a special fungus. These are declared to be the originating causes of the respective diseases. Our ideas as to the nature and character of these affections are as yet mainly based upon their clinical course, but we have also derived something from inoculation experiments. Tuberculosis and syphilis are thus known to be communicable from one person to another; tuberculosis is also communicable from man to the lower animals.[7] Inoculation with sputa containing bacilli of tubercle gives rise to tuberculosis, which is developed more rapidly when the bacilli are abundant. The inoculated bacillus multiplies in the organism, and invades the lymphatic system, liver, spleen, and serous membranes; by its presence it sets up a chronic inflammatory process, with the formation of products which become cascified, and subsequently soften, producing gradual destruction of the organs. The bacillus is found in the centre of the tubercles in their earliest stage of formation, and hence is the cause and not the effect of the morbid process. The lymphatic vessels, amœboid cells, and the blood current are the means by which these micro-organisms are transported from one organ to another and diffused throughout the body.[8]

(*To be concluded.*)

[6] Ibid., part i., p. 48. [7] Ibid., part i., p. 183.
[8] Sormani London Medical Record, 1884, p. 53.

REMARKS ON THE

COMMUNICABILITY OF PHTHISIS.[1]

BY ALFRED G. BARRS, M.D. EDIN., M.R.C.P. LOND.,
PHYSICIAN TO THE LEEDS PUBLIC DISPENSARY.

[DR. BARRS having reviewed in detail the experiments and observations of Buhl, Klencke, Villemin, Marcet, Wilson Fox, Koch, Watson Cheyne, Spina, Cohnheim, Tappeiner, Schottelius, Aufrecht, Weichelsbaum, Poulet, and others, proceeded as follows]:—

According to Koch and Watson Cheyne, then, our definition of tubercle in the future is to be by the presence of the tubercle bacillus; and I am not sure that we, who are not mycologists, are in a position to oppose this change. For some years past there has been a general falling away from old morphological or histological definitions in this matter; caseation is gone as a test; the giant-cell has been found in many admittedly non-tubercular substances, such as the syphilitic granuloma; and the old intercellular network has been removed by Cornil and Ranvier. Almost all pathologists are prepared to define tubercle, apart from the bacillus, rather by its distribution and tendencies—its life history in short—than by any peculiar structural element. That tubercular processes, as we most commonly meet with them in phthisis, constantly show the bacillus in greater or less quantity, I have no doubt; I have myself found it in all the cases of phthisis (thirty in number) which have come under my observation during the last year, and the number of cases on record in which others have found it now far exceeds five hundred. Of negative observers upon this point, I shall refer to one only, who, if he still adheres to his original position in regard to the bacillus, stands almost alone. I need scarcely say I refer to Spina, of Vienna, who, with great energy and some feeling, took up every point in Koch's paper, and produced arguments and experiments to refute them. He denied the characteristic reactions of the bacillus, and that they were found in tubercular matter only, and adduced many other points which have needed confirmation from the time they were published (1883) to the present. In short, the constant presence of the bacillus in tubercular tissue has been affirmed by all who have taken the trouble to look for it, and in no other substance has it been found.

Time does not permit me to enter into any discussion of the relations of tubercle to phthisis. Were I to propound a view which I held almost up to the time of collecting the materials for this paper, I should, I doubt not, be accounted one of a bygone age. The simple broncho-pneumonic theory, as propounded by Niemeyer, now nearly twenty years ago, and twenty years before that by Addison, had always seemed to me one which could be embraced without doing violence to one's reason or to clinical and pathological facts. Indeed, when tubercle was looked upon as clinically malignant, one saw no other way of explaining the cases of recovery which one was now and again obliged to admit, as well as the large number of cases which used to be designated, and, as it seems to me, rightly so, mechanical phthisis; but the discovery of the bacillus has changed all this. When in every case of phthisis an organism is found which is common to it and all other manifestations of tubercle in the human subject, and also in all animals subject to the disease, spontaneously or artificially produced, one cannot but abandon, though with much regret, the dualistic theory; in fact, I believe the unity of pulmonary phthisis is now almost universally admitted.

As to the positive evidence of contagion in the human subject, there is little forthcoming, and that little is of a very doubtful nature. In this country the only extensive investigation made in this direction was made by the Collective Investigation Committee last year. Prior to this the only cases on record are those previously referred to, published by Dr. Hermann Weber and Villemin. The Collective Investigation Committee, as will be remembered, issued to the members of the British Medical Association, on two occasions inquiries as to the communicability of phthisis. Of the 10,000 or more members, only 1028 replied; of these, 673 had seen no examples, 261 reported cases they

[1] Being the concluding portions of a paper read at the opening of a debate on the Communicability of Phthisis, at the meeting of the Leeds and West Riding Medico-Chirurgical Society, March 7th, 1884.

believed to support the infective theory, and the remainder were doubtful or negative.

I propose to criticise with some minuteness Dr. Hermann Weber's cases of supposed transmission from husband to wife. I do this because they are the most fully reported cases with which I am acquainted, and because they are not unfrequently quoted by the complete believers in communicability as providing almost all that is to be desired in the way of evidence in favour of their views. The cases are nine in number, and are reported in the Transactions of the Clinical Society for 1874, though they seem to have occurred some years previous to that time. The husband is in every instance described as of consumptive family; they all (the husbands) suffered from hæmoptysis between their eighteenth and twenty-first years; and they all survived, save one, a second marriage at least; and one survived a fourth, and another a third. The marriages, too, were not repeated with absolutely indecent haste, consequently the husbands survived for some considerable period in each case the first marriage, in which they are supposed to have transmitted phthisis to their partners. They are all described as healthy, or considered so, at the time of marriage; and they all, save one, died of phthisis, as stated by their medical attendants or as ascertained by post-mortem examination. Amongst the many remarkable points in these cases, the most noteworthy to me is the period of time which elapsed between the supposed infection of the first wife, when of course the husband was regarded as suffering from phthisis, and his death. In Case 1 the period I have calculated from the facts given was at least twenty-five years, in Case 3 nine years, in Case 4 twelve, in Case 6 eight, in Case 7 eight, and in Case 8 ten; in the remaining cases no definite figures are given, but calculating from the number of pregnancies of the wives and other statements it may be roughly stated at from five to nine years. The man in Case 9 married his first wife in 1867, his second in 1868, and was living and well in 1872. To return to Case 1. A man said to be of marked phthisical family, to have had hæmoptysis at twenty-one, and to have infected four successive wives with consumption, lives through twenty-five years to tell the tale. Can this seriously be taken as an example of infection from husband to wife? Suppose him to have been perfectly well, as stated, at twenty-seven, when he married his first wife, who showed symptoms of phthisis after the third pregnancy—that is, four years after marriage at the earliest,—and take this as the commencement of his own disease; after an interval of ten years he marries his second wife, whom he infects; the intervals between the second and third and third and fourth are not given, but say the time allowed to elapse between the death of one wife and the marriage of another was twelve months; this, added to the time which each wife lived, will give us a period of not less than seven years, during which period he must have been exhaling the contagium of phthisis, or, in other words, have been suffering from active lung disease, and then survived the last of his supposed victims for eleven years, when he died and presented the following changes in the lungs: "a cicatrised condition of the former seat of disease, and also the recent affection." I confess I do not see my way to accepting in any sense this case as proof of direct infection from husband to wife; rather it is to me a more than gratifying example of the curability of phthisis, and a proof that a man may cohabit with four individuals dying of consumption, who is himself of consumptive extraction, who has exhibited lung symptoms from his twenty-first to his twenty-fifth year, and lives to the not unripe age of fifty-seven, having expressed some doubts as to the propriety of even a fifth marriage.

This line of criticism, which I deem not unfair, may be applied with the same result to all Dr. Weber's cases. They prove too much, not only of contagion, but of recovery from what we regard as a commonly lethal condition. The cases published in abstract in the Collective Investigation Record scarcely admit of analysis, the statements being in so many cases simply the conclusions of the reporters, and not the facts upon which the conclusions are based. In Dr. Weber's cases, and also in the collective investigation cases, I beg you to notice the entire absence of cases of acute general tuberculosis, of tubercular meningitis, strumous arthritis, and of urino-genitary tuberculosis, all of which diseases are to be accounted manifestations of tubercular affection in the human subject, and cases of which we have a right to expect if the theory be true as applied to man in these so-called examples of infection.

To proceed further with the negative side of the question. I need scarcely refer to the very striking statistics of the Brompton Hospital in regard to the affection of attendants resident in the hospital. During the last twenty-five years not a single case of phthisis fairly traceable to the surroundings could be found amongst more than 250 officials connected with the hospital during that time. The mortality, in fact, amongst residents was lower than in some general hospitals. It has been said that this proves only that under such conditions as exist at Brompton phthisis is not contagious, and that it cannot be taken as in any degree settling the whole question. But, I would ask, do the conditions at Brompton differ in kind or even in degree from the condition under which life will go on amongst us? The element for contagion has been shown to exist in the atmosphere of the building generally, and Dr. Charnley Smith has shown also that the bacillus is continually escaping from the air-passages of phthisical patients.

My own conclusions upon this extremely wide and difficult question are, I need scarcely say, subject to revision. In the main they are as follows:—1. The tubercle bacillus is constantly found in all lesions of a tubercular nature, and in all cases of pulmonary phthisis in the human subject. 2. So far as the communicability of tuberculosis in animals is concerned, this is clearly proved by inoculation experiments. Whether it is so without antecedent traumatism there is very little evidence to show. 3. The great prevalence of phthisis amongst those of certain occupations, and the comparative rarity with which those presenting caseous changes in the lungs die by means of a general infection, tend to show that certain predisposing causes are necessary for the production of phthisis—some more definite condition than a mere obliquity of construction, such as we mean by constitutional tendency. The bacillus is not in this case the real and primary cause of the disease, but by its constant presence may determine a wide distribution of the lesion and a fatal result. 3. Although the discovery and isolation of Koch's bacillus and the inoculation experiments upon animals make the direct infection of individuals with tuberculous matter possible under certain conditions, these conditions are not established by our present mode of life. 4. The clinical evidence of direct infection from man to man is at present of a quite untrustworthy nature. I need scarcely add that the want of proof of direct contagion in no way militates against the view that pulmonary phthisis is an infectious disorder—that is, due to the introduction of an infective particle from without.

SOME

STATISTICS AND OBSERVATIONS REGARDING LITHOTOMY IN THE HYDERABAD CIVIL HOSPITAL, SINDH.

BY SURGEON-MAJOR B. C. KEELAN, I.M.D.,
ACTING CIVIL SURGEON, HYDERABAD, AND SUPERINTENDENT OF THE HYDERABAD MEDICAL SCHOOL; CIVIL SURGEON, DHULIA, BOMBAY PRESIDENCY.

TABLE I. is a summary taken from the monthly returns of the above hospital of the operations for lithotomy performed by myself from the 1st January, 1883, to the 31st August, 1883, a period of eight months. It gives the number of cases, with the ages, results of the operation, &c. The patients were all in good health, with the exception of the symptoms arising from stone in the bladder. Of the 102 cases operated upon, 81 were Mussulmans and 21 were Hindoos, of whom 98 were males and 4 were females. To avoid taking up too much space, I have been obliged to arrange their ages into quinquennial periods. The table will show that Sindees are infinitely better subjects for operation than Europeans, being so much less liable to inflammation setting in after the operation, owing probably to the simple manner in which they live, and perhaps to the very dry climate of Hyderabad. The operations at the other hospitals in Sindh, though fewer, have reached to pretty nearly about the same favourable results; consequently lithotomy here in Sindh is not looked upon as a formidable procedure, as is the case in Europe, owing to the mortality being comparatively so very low. The table will also show the average number of days spent in hospital, as well as the average duration of the formation of calculi, arranged in quinquennial periods, to correspond with the ages of persons

operated upon; the weights of the stones are arranged in the same manner for the purpose of condensing information.

It will be seen from the statistics that stone in this country is more prevalent in children from one to ten, and in adults from thirty-one to fifty, years of age than at any other time of life; during this latter period of life also calculi are larger, taking the average; this is remarkable, but is nevertheless the case. My object in publishing these statistics is to point out the superiority of lithotomy as an operation over that of lithotrity, and also to show a cursory outline of the method of operating upon, and of treating calculus in the bladder as carried out in the Civil Hospital of Hyderabad, Sindh, which is considerably the largest hospital for lithotomy in India.

It may be interesting to the profession in England to mention that stone in the bladder is exceedingly common all over Sindh, a district in the Bombay Presidency about as large as England and Wales. Through the middle of this tract of land passes the mighty river Indus, which takes its origin from the melting snow of the far-off Hindoo Khoush Mountains, and courses down through the Punjaub and Sindh, falling into the Indian Ocean south of Karachi. Indeed, I think I may say without fear of contradiction, that calculus in the bladder is much more prevalent in Sindh than in any other part of the world. It appears to be hereditary, and in my opinion it also arises from drinking the muddy water of the river Indus and its tributaries, which the natives of this country invariably do without filtering it, or even allowing to settle to the bottom of their vessels the silt which is suspended in it so abundantly as to render it quite thick and of a brownish colour; however, the addition of a few grains of alum makes it clear and sparkling; but the natives, though many of them are aware of this fact, seldom trouble themselves about it. Again, Sindh is probably one of the most dusty countries in the world, especially lower Sindh, so that the native inhabitants (Sindees) may truly be said to be continually eating and drinking fine particles of earth. I imagine there can be no doubt whatever but that this alluvial matter, all of which is carried down by the Indus, is the fountain head to which the origin of stone in the bladder can be traced in this part of India, and that the silt brought down by the river from its source supplies to the urine the earthy materials from which the calculi are formed in the bladder.

Table II. shows the number of patients operated upon who were able to trace their own disease (calculi) in one or more members of their family, including also their cousin relationship; it also shows the kinds of stones operated upon, as well as the quality of the water used for cooking and for drinking purposes. It will be seen that no less than 90 per cent. of the persons operated upon used for all purposes the muddy river water; nearly 23 per cent. may be said to have been hereditary; and nearly 70 per cent. of the stones operated upon were phosphate of lime. Professor Gamgee states that the sheep in the hill districts of Wales get stone in the bladder from feeding on the short grass, which is covered with dust, and which is peculiar to the sheep hills of that country; and I see no reason whatever to suppose that the prevalence of stone in Sindh may not be attributable to the same source. Professor Gamgee's statement no doubt applies to Sindh and the Sindees.

Table III. gives the number of stones extracted in each of the 102 cases of lithotomy under review, the number of cases previously operated upon, and the interval between the first and second operation, also the weights of the secondary

TABLE I.

Ages in quinquennial periods.	No. of cases operated on.	Result. Cured.	Result. Died.	Average number of days in hospital.	Average duration of illness, in months.	Weight of stones corresponding to the different ages of persons operated on, arranged quinquennially.
1 to 5 years	17	17	—	14	14	3 dr.; 20 gr.; 40 gr.; 6 dr.; 3 dr.; 3 dr.; 1 dr.; 3 dr.; 1 dr. 12 gr.; 1½ dr.; 4½ dr.; 2 dr.; 1½ dr.; 2 dr.; 4 dr. 9 gr.; 3 dr. 20 gr.; 5 dr.
6 to 10 ,,	12	12	—	15	20	1½ dr.; 2 dr.; 1½ dr.; 2 dr.; 2 dr.; 3 dr.; 1½ dr.; 1 dr.; 5 dr.; 6 dr.; 5 dr.; 3 dr.
11 to 15 ,,	4	4	—	15	24	6 dr.; 5½ dr.; 1 oz.; 3 dr. 6 gr.
16 to 20 ,,	3	3	—	21	28	1 oz. 2 dr.; 2 oz.; 1 oz. 6 dr.
21 to 25 ,,	5	5	—	25	30	3 oz. 5 dr.; 1 oz. 2 dr.; 1½ oz.; 1½ oz. ½ dr.; 1½ oz.
26 to 30 ,,	7	7	—	25	30	7 dr. 12 gr.; 7 dr.; 4 dr.; 1 oz. 7 dr.; 3 dr.; 2 oz.; 1 oz. 2 dr.
31 to 35 ,,	12	11	1	25	37	3 oz. 2 dr.; 1½ oz.; 2 oz. 6 dr.; 3 oz. 2 dr.; 1 oz.; 2 dr.; 1 oz. 2 dr.; 4½ dr.; 1 oz. 2 dr.; 1 oz. 5 dr.; 2 oz. 1 dr.; 1½ oz.
36 to 40 ,,	15	15	—	28	37	5 oz.; 1½ oz.; 1 oz.; 1¼ oz.; 2 oz.; 3 dr.; 3 oz.; 3 oz.; 3 oz.; 1 oz. 20 gr.; 1½ oz.; 2½ dr.; 3 oz.; 1 oz. 6 dr.; 3 oz.
41 to 45 ,,	5	5	—	28	38	3 oz.; 2 oz.; 1 dr.; 2 oz.; 3 oz.
46 to 50 ,,	12	12	—	30	45	1 oz. 2 dr.; 2 oz. 2 dr.; 1 oz.; 4 oz. 5 dr.; 1 oz.; 2½ oz.; 1½ oz.; 2 oz. 6 dr.; 1½ oz.; 1 oz. 2 dr.; 3 oz.; 2½ oz.
51 to 55 ,,	6	5	1	30	36	4 dr. 6 gr.; 6½ dr.; 2 oz.; 1 oz. 3 dr.; 2½ oz.; 3 dr.
56 to 60 ,,	2	2	—	30	24	4 dr. 20 gr.; 6 dr.
61 to 65 ,,	1	1	—	30	36	1 oz. 3 dr.
66 to 70 ,,	1	1	—	30	48	2½ oz.
Total	102	100	2	—	—	

TABLE II.

Number of cases operated upon.	Hereditary.	Non-hereditary.	Kinds of stones. Lithic acid.	Kinds of stones. Phosphate of lime.	Kinds of stones. Oxalate of lime.	Quality of water used for drinking. Well water.	Quality of water used for drinking. Muddy river water.
102	23	79	20	70	12	8	94

TABLE III.

Number of cases operated on.	Number of stones in each case. One stone.	Two stones.	Three stones.	Four stones.	Number of cases previously operated on.	Interval between the first and second operation.	Weight of secondary stones.
102	88	8	5	1	4	1. Forty months 2. Twenty-seven months 3. Thirty-one months 4. Thirty-three months	2½ oz. 1 oz. 1 dr. 1½ oz. 1 oz.

Table III. gives the number of stones extracted in each of the 102 cases of lithotomy under review, the number of cases previously operated upon, and the interval between the first and second operation, also the weights of the secondary

stones. All the secondary stones were composed of phosphate of lime.

From observation of several hundred cases of lithotomy, I find that it takes on an average about two years and a half for a stone weighing, say, two ounces to form—that is, of course, counting from the time the symptoms begin to be observed by the patient; a stone of five ounces will take seven or eight years to form. Small stones weighing only two drachms in the bladder of an adult, provided always that they be smooth on the surface, will cause very little inconvenience or suffering, and adults rarely apply for relief when the stones have only reached this stage of development. I have frequently operated on the same patient twice in from four to six years, each time the stone weighing from two to nearly three ounces. The lateral operation is the one invariably performed in the Hyderabad Hospital. The calculus is reached in the usual way; if it be small there is never any difficulty, but if large its successful removal can only be accomplished by long practice. In removing a large stone, it should not be taken out of the bladder with any degree of force, nor should pulling be resorted to, lest the neck of the bladder be contused and lacerated; of all others, this is the chief point to be attended to in lithotomy, for any departure from this, which should be considered a golden rule, would be the cause of immense mortality—a fact which is experienced by young operators, and which I have had experience of myself as a beginner. Before applying the forceps to the stone, the forefinger of the left hand is passed through the wound on to the stone, the size of which is ascertained, then a blunt pointed knife is passed along the finger, and the neck of the bladder incised according to the size of the stone; the wound is also enlarged proportionately; then, having applied the forceps, the stone is pulled in the proper direction, and at the same time rocked a little from side to side and from above downwards; this has to be very gently done. If the stone does not come then, the forceps is given to an assistant to hold, and the index-finger of the left hand is inserted into the wound, which is searched in every direction, and that part of it which is put on the stretch, by the pressure of the stone against it, is cut pretty freely in as many places as the circumstances of the particular case will demand. It matters not whether it be above, below, or to the right or left side; the soft parts must be cut in all directions, if necessary, rather than use force. Then the forceps is again taken from the assistant, and the stone gently pulled and rocked as before; it is on this procedure that the success of the operation for extracting a large-sized stone entirely depends, and the cutting process just described is repeated as often as necessary. Hæmorrhage is exceedingly rare, and is easily restrained. I have only seen three or four instances of severe bleeding amongst hundreds of cases, and these were soon arrested. After the operation the patient is placed on his side, the thighs being brought very close together; a compress of very fine tow (called by us in India "surgeon's tow,") is placed on the wound, and held there tightly by an assistant for half an hour or longer if necessary. This is the very best way I know of compassing the stoppage of hæmorrhage; it is very simple, no styptics being required, for these often do harm by irritating the bladder, and it is a great mistake to suppose that bleeding will take place into the bladder when the wound is pressed externally. Plugging the wound round a catheter should be avoided; it is most objectionable and hurtful to the patient. In the after-treatment no catheter is required to be placed in the wound; it does not answer, as it keeps up irritation of the bladder—the very thing, of all others, to be avoided after the operation. It is better that the urine should pass through the wound unaided, unless it happens to be stopped momentarily by clots of blood, and then it is sufficient merely to pass a straight silver tube, just to clear the passage for the urine to flow, and then withdraw it immediately. It is not very often that clots impede the passage of urine, and only when this occurs should a tube be passed through.

Hyderabad, Sindh.

THEFTS FROM MEDICAL MEN.—A young man was recently charged at Liverpool Police-court with a long series of thefts from the houses of medical men, committed whilst he was ostensibly waiting the return home of the doctor. The property stolen from over twenty members of the profession in Liverpool, Birkenhead, and Manchester, included many surgical instruments, a galvanic battery, and various articles of clothing. The prisoner was committed for trial.

ON FIVE CASES OF

SPORADIC CRETINISM IN SCOTLAND.

BY ROBERT KIRK, M.D., F.F.P.S. GLASG.,
OUT-DOOR PHYSICIAN-ACCOUCHEUR TO THE GLASGOW WESTERN INFIRMARY.

SPORADIC CRETINISM is not only interesting from its rarity, but has acquired an unusually high degree of importance of late from its probable affinity to myxœdema in adults. The following account of five cases I have lately met with, of which two are represented by woodcuts, will therefore be read with interest.

CASE 1.—G. B——, a boy aged twelve years (Fig. 1). I encountered this case accidentally in my daily rounds, and was at once struck with the close resemblance he presented to the only case of myxœdema I had previously seen, that of a female aged fifty-six, and which I showed to the Medico-Chirurgical Society of Glasgow last winter. The boy was enormously swollen, and judging from his height, seemed only three years old, although I was told he had reached the age of twelve. On inquiry, the following particulars were elicited. His parents belong to the village of Ladybank, in Fifeshire, where I afterwards met with Case 2. They are both healthy and well developed, above the average height (the father being six feet high), not related to each other,

FIG. 1.

free from goitre, and of strictly sober habits, the father never having been intoxicated in his life. There is no history on either side of goitre, intermarriage of relatives, intemperance, or tendency to any hereditary disease. The boy is the fifth of six children, all of whom are well except himself. During gestation his mother felt ill, took little food, and vomited much. She had severe pains or cramps in the abdomen almost daily; these often compelled her to get out of bed at night and sit by the fire for hours together. When the infant was born he was large and stout, and, as the mother supposed, an unusually fine child; he was at least half as heavy again as any of her other children at birth. She soon observed, however, that he was very sluggish; he always leant forwards in her arms, and he slept a great deal; he seldom cried, and did not smile like other children; his skin was always cold. He did not grow taller; did not walk till he was five years old, and then with a feeble, tottering step, the slightest obstacle overturning him; he did not get all his teeth till seven, when also he first made some rude attempts at speech. He had become much stouter during the last two years. He is now three feet in height, and weighs 4 st. 1 lb. He measures round the head 20½ in., round the abdomen 29 in., and round the thigh 16 in. His legs and arms are short; he is extremely broad in proportion to his height; buttoned in his coat, which reaches below his knees, he is like a barrel, and is, in fact, a marked example of myxœdema. The face is as broad as it is long, dull, and expressionless; ears thick and doughy; lips thick; hands short, swollen, and clumsy; ab-

domen very protuberant, communicating a feeling of resistance and solidity on pressure; eyelids puffy; neck short and thick; skin hanging in large folds from the lower jaw. The supra-clavicular swellings, described by Mr. Curling and Dr. Fagge, are well marked on either side; they are soft and inelastic, but do not seem capable of being drawn down over the clavicle; they are not well-defined, but merge gradually into the surrounding swollen integument; the folds of skin hanging from the jaw rest on them, so that the neck presents a deep transverse fissure. The outline of the trachea can be distinctly traced by the fingers, apparently indicating the absence of the thyroid body; but, desirous of having further evidence on this important point I requested Dr. H. C. Cameron, surgeon to the Western Infirmary, to examine the case; he kindly did so, and came to the conclusion that the thyroid body was entirely absent. The nose is small and somewhat flat; depressed at the root, and slightly turned up at the point; the alæ nasi are but little expanded, and the interval between the eyes is not abnormally great. The forehead is somewhat narrow, and the head round; the anterior fontanelle is not yet closed, and the bilateral diameter of the head seems large in proportion to that of the antero-posterior. It appears to be the same with the trunk, the back being very broad and flat; there is a slight anterior curvature of the spine (lordosis) in the lumbar region, and the tibiæ are slightly bent at their lower part. The skin is rather sallow, but has a tolerably healthy appearance, and is not translucent; the cheeks are a little ruddy, but do not show the pink spots of adult myxœdema; the exposed parts of the skin are cold to the touch; the backs of the hands are wrinkled, but in most parts the skin is smooth and soft, and nowhere shows any tendency to furfuraceous desquamation. Dr. Ord has remarked[1] that we do not find in the report of the Sardinian Commission on Cretinism that a general dryness, harshness, and coarseness of skin prevails among cretins as in adult subjects of myxœdema, and it is interesting to remark that my patient conforms to the description of the former, and not the latter. Nevertheless, I observed that if the surface of the skin in some parts, as over the loins and the lower limbs, was gently grazed with the fingers or the palm of the hand, a sharp grating sensation was felt, like that communicated by sandpaper. He never sweats, and the secretion of sebaceous matter seems to be arrested. The hair of the scalp is very scanty and scattered; it is harsh, dry, and brittle, and the skin scurfy, amounting to pityriasis capitis. The eyebrows are rather thin and slightly oblique, eyelashes long, thin on the lower lids, which are red and inflamed. His nails are very thin and brittle. He has all his first set of teeth, although the back ones have partly decayed; the front ones are blackish and very small, leaving a free space between each. The tongue is thick and dry; the hard palate not much arched. The pulse is 76, weak; respiration short and quick (32), often accompanied by a slight snuffle, or rather snort; temperature in the axilla on three occasions, 97°, 97·8°, and 97·6°. He likes the fire in cold weather, but does not quickly feel changes of temperature. He eats and drinks very little; sleeps regularly twelve hours out of the twenty-four, snoring loudly. His urine averages 10 oz. in the twenty-four hours; feebly acid, sp. gr. 1025, free from anything abnormal; I have not yet made any estimation of the daily excretion of urea. All his movements are extremely slow. He walks with a balancing gait, the legs being wide apart, and is still very easily knocked over. His intonation is strongly nasal, his speech confined to single words for the most part, and he frequently omits consonants. His parents have never attempted to teach him the alphabet, and he cannot count ten. He is very quiet and docile, and has no mischievous propensities. His senses seem all good, and he feels a pinch or scratch acutely. He is fond of music, and can even hum a tune. He sometimes laughs heartily, and frequently he relaxes into a smile; when he does so the swollen eyelids close altogether, and I have been struck with the identical expression which he then assumes to the case of adult myxœdema already mentioned.

CASE 2.—A. D——, aged eleven years, also a boy (Fig. 2), was born in the village of Ladybank, above mentioned, the native place of both his parents. The family history is the same as in the preceding case, with the important exception that the mother has a goitre larger than the fist on the right side of the neck, which began to appear, she says, shortly after she was married. Her mother had a small hard swelling the size of a marble on the front of her neck. Of six maternal aunts, two (both unmarried) had large goitres, one of them extending quite across the neck. These are all the instances of bronchocele she knows of amongst her ancestors, and there were none in her husband's family. The child in question is the fifth of nine, and was born when the mother was thirty-three; all her other children are well. During pregnancy there was nothing unusual in her state of health, except that she felt weak and disposed to rest during the latter part of it. She suffered severely in labour, but was delivered without forceps. The child at his birth was short and thick, especially over the belly; she is sure he was much heavier than any of her other children. He had long, dark, curly hair, extending even over his back, but this was all shed before he was a few months old. All the rest of her children were fair, and had light hair, which at first was both scanty and short, but gradually grew. His skin was very dark, and his lips blue, sometimes intensely so; his entire body was cold: these peculiarities have continued ever since. He slept a great deal, and, in short, progressed like Case 1 in every respect. He has never had any ailment, although he has slept in the same bed with cases of measles and whooping-cough. He is now 2 ft. 7 in. in height, and weighs 2 st. 9 lb. He measures round the head 21 in., and round the abdomen 24 in. His legs and arms are short, and not very thick; head massive; trunk voluminous in proportion to his height; neck extremely short, the head being set

FIG. 2.

almost directly on the shoulders. He is of a more pronounced cretinous type of conformation than G. B——, although by no means such a well-marked example of myxœdema; the broad, squat build thus appearing to be dependent on the skeleton, and not on any growth of soft tissue. His head is long, as well as broad; anterior fontanelle not yet closed; forehead high and broad; face broad and flat, though not much swollen; mouth large and wide, and lips thick; nose flattened at the root, markedly elevated at the point; alæ nasi more flattened and curved than in G. B——; wider interval between the eyes; eyebrows more oblique. The trunk is bulky, and the bilateral diameter great in proportion to the antero-posterior, making the back broad and flat; some degree of lordosis of the spine in the lumbar region; tibiæ bent at their lower part. The soft parts of the body are not much swollen; the ribs are very distinctly seen, and even the outline of the abdominal muscles is visible to the eye. The supra-clavicular eminences are but slightly marked; indeed, they can scarcely be said to exist, but his mother expressly states that he often swells considerably in their situation, especially on exertion. I could detect no trace of a thyroid body, but he made the examination difficult by a sturdy resistance. His skin is cold; it is dark, sallow, and dry, and has a leathery appearance; in many parts, as the scalp, it is wrinkled, and can be pinched up into large folds, as in advanced cases of adult myxœdema. The scalp, hair, and nails resemble those of Case 1; there is no furfuraceous shedding of epithelium. There is no translucency of the skin anywhere, and no pink flush on the

[1] Med. Chirurg. Soc. Trans., vol. lxi., p. 70.

cheeks. He does not sweat. The skin feels like sand-paper when gently rubbed; it is thickest over the back of the neck, the belly, scrotum, and thighs, which are probably the seats of some amount of myxœdema. He has only a few teeth in front, which are small and discrete, as in G. B——; the back ones have been lost by decay; he never shed any, and has got none of the permanent set. The tongue is broad and thick, dry, and leathery; the palate narrow and highly arched. His gait is a feeble, waddling totter, with the legs widely apart, as if in momentary expectation of falling. His speech is inferior to that of Case 1, and he is slower in his movements. He is in some respects livelier, however; he frequently laughs, and has a considerable sense of humour; he also resents interference more, and cries lustily. He is not vicious, and behaves very well in church. All his senses are good, and he is said to be fond of music, although he cannot reproduce any musical note. He takes very little food, and sleeps much; his circulation is very feeble; respiration not hurried, as in Case 1 (this, I believe, being due to the myxœdema in the latter); temperature in the axilla, 97 6°. Through the mother of this patient I learned of the existence of the following three cases.

CASE 3.—G. R. H——, a boy, aged ten years and a half, living in the town of Perth. The family history in this case is the same as in Case 1. The boy was the first of four children, all of whom are well except himself. During pregnancy his mother had the best of health, but during the latter part of it she had frequent occasion to see a dwarf (whom, she says, her boy now resembles, and who, indeed, seems to have been a cretin), but she attached no importance to the circumstance. About the eighth month she had a fall, and afterwards she supposed the child was dead, as movement nearly ceased. He was born apparently lifeless, but the doctor succeeded in resuscitating him; he was a feeble infant, and was both short and thin; his legs and arms, besides being thin, were short in proportion to his body. His history from infancy onwards has been much the same as in the former two cases, except that he was not so slow in any respect, that he never swelled, that he did not sleep more than usual, and that he has two lower incisors of the permanent teeth. He can read a few words, but his father remarked that it was vain to send him to school. His height is 2 ft. 11 in.; his weight has not been ascertained, but on lifting him he feels very heavy and solid. He measures round the head 20⅝ in., and round the abdomen 23½ in. The occiput projects backwards, making the head look very long; the arms and legs are very short in proportion to the trunk, which is not so broad as in the previous two cases; neck thin, and not very short; abdomen tumid, soft, and yielding. He seems muscular about the limbs; the muscles of the calf, thigh, and arms are very prominent; the pectorals are not in proportion. His face is not too broad in proportion to its length, but the lips are thick, especially the lower, and there is a wider interval between the eyes than in Case 2; nose markedly depressed at the root, and a little upturned at the point; cheeks a little puffy and flaccid. The tongue is moist, and not too large. The two permanent incisors above mentioned have each two marked perpendicular notches, thus presenting three points along their edges. The ears are a little doughy, but not thick; the hands sallow and wrinkled; neck thin; lower part of the larynx pretty close to the sternum. The thyroid could be felt, as I supposed, on the right and over the isthmus, but not on the left; no trace of supra-clavicular swellings; no folds hanging from the jaw. He is somewhat fair and freckled, but sallow compared with his brothers and sisters; hair coarse, dry, and somewhat scanty. The skin feels cool, and there is free desquamation of fine cuticular scales at all parts; this is very visible to the eye, and when his shirt is taken off a fine shower falls, which, his mother says, is of daily occurrence. Nevertheless, the skin is everywhere soft, and communicates no sand-paper feeling to the fingers; veins are visible all over the surface, especially over the abdomen. His nails are brittle; the front edges of the finger-nails curve forwards at a right angle to the posterior part; the nails of the great toe are traversed by several transverse markings. He walks very well, and with a short, decided step. He speaks pretty well, but his intonation is markedly nasal. He can write figures and letters on a slate, and can read a little. All his senses are good. His circulation and respiration are feeble; temperature 98·2°. He is extremely sensitive to cold, and fond of the fire. He never sweats except in hot weather, and he takes very little food. His parents are not aware whether he can recognise colours, of which his vocabulary does not include the names; though he is said to have a retentive memory in some things, and to be very observant.

(To be concluded.)

ALIBERT'S CHELOID (?) FROM INDIA.

BY A. ST. CLAIR BUXTON, F.R.C.S.

MR. J. Y. D——, a gentleman in the prime of life, presented himself to me in January for surgical assistance. He told me he had lived in India for several years, and had always enjoyed good general health. About two years ago some small boils (not Delhi boils, which are probably parasitic) made their appearance in various regions, some on the shin of one leg. In due course they went through the usual stages, and eventually nothing remained except a sense of soreness about the seat of those on the shin. This soreness continued, and although the skin was not acutely inflamed nor broken, an elevation was after a while noticed at one of the tender points; it was pale and flattened, and it increased by spreading in each direction (without rising much), but more in the direction of the axis of the limb than laterally. Another of the points took on the same action, and yet another. These were all situated about the junction of the middle and upper third of the leg on its anterior aspect, the largest being over the internal surface of the tibia, the others over the tibialis anticus. Meanwhile medical aid was had recourse to, and dilute nitrate of mercury ointment was applied, but without much benefit. Then iodine was tried, with the result of lessening the dimensions of the patches to some extent. As little or no inconvenience, beyond occasional irritation, was felt, the treatment became somewhat neglected. About this time Mr. D—— accidentally scraped his shin, by missing his footing, against the sharp iron step of a railway-carriage, and the edge of the metal plate roughly tore away one of the large patches. After the abrasion had healed, it was observed that the cicatrix was thickening and beginning to spread. He then came to England, and it was at this period that I saw him.

Careful examination revealed three islands of elevated tissue, two of which had nearly coalesced, the third being quite separate. They were all more or less of an elongated oval form, raised about the eighth of an inch, or rather more, above the level of the surrounding skin; pale, smooth, and dense, with hair growing sparsely in, though abundantly around, them; and each having a dull bluish tint along the borders. Pressure with the finger produced little or no indentation, but some pain. Two or three groups of suspicious-looking purplish spots, each about the size of a sixpence, were scattered about the leg. These faded somewhat on pressure. A few days later some of them broke down into a state of ulceration, and ran together; these were over the front of the ankle, and on the lowest third of the leg. The others remained passive awhile, and then slowly disappeared. Probably a high-laced boot was answerable for these ulcerations.

The family history of the patient proved no inheritance of syphilis, nor had the disease ever been contracted. The other leg had always remained sound, and the original boils had healed up in the other parts of the body; indeed, all trace of them had vanished. Dust and sand might have contributed something to the pervertion of the cell growth now under consideration. Free perspiration would, it is conceivable, cause much foreign material to adhere in a fine state of division to the lower extremities, and this would be rubbed into the surface of the skin by the clothes, and produce considerable irritation in tender spots. My diagnosis was "perverted cell growth in the cutis vera," and for want of a better name I called it "cheloid."

I suggested an absorbent plan of treatment for the elevations, and I healed up the raw surface with lead lotion. The absorbents, however, appeared not to have the slightest effect on the patches, and I then proposed to my patient that we should seek the assistance of Sir Joseph Fayrer, to which he readily assented. Sir Joseph went most carefully into the details of the history of the case, and finally agreed that the tumours were the products of perverted cell-growth in the cutis vera, but would not pledge himself as to their being cheloid. As absorbents had failed, it was deemed desirable

that an attempt at radical cure should be made at once. Sir Joseph thought it was within the bounds of possibility that a growth of this type might take on a malignant tendency if subjected in a hot climate to continued irritation. The course he advised was steady blistering until complete destruction of all epithelial tissue had taken place both at the seat of trouble and well round it, keeping the sore open and active by the application of savin. This plan of treatment I carried out fully, and produced a couple of large deep ulcers, the two patches which were so near together being treated as one. I kept the sores open for nearly three weeks, and then allowed them gradually to heal, dressing them with carbolised oil (1 in 20). The carbolic acid was well borne, and I had the satisfaction of finding the resulting cicatrix firm and flat. The last dressing was applied on March 5th, and since that date Mr. D—— has had no symptoms of any return of his trouble. Perfect rest in the horizontal position, with the leg well up, was maintained throughout.

Orchard-street, Portman-square, W.

CASE OF SACCULATED ANEURYSM OF THE DESCENDING THORACIC AORTA OPENING INTO THE LEFT BRONCHUS.

By C. D'A. COLLINGS, M.A., M.B. Oxon.

THE following case is interesting from the rarity of similar aneurysms in women, and from the difficulty of arriving at a correct diagnosis before the bursting of the sac into the air-passages.

Maria C——, aged forty-eight, a Frenchwoman, of intemperate habits, but without any distinct syphilitic history, was admitted into the hospital on April 26th, suffering from dyspnœa. She carried on her trade as a hawker until two or three days previously, when, the difficulty of breathing having increased, she took to her bed.

On admission her temperature was 103·5°, pulse 120, and respiration 55; lips and nails livid; respiration somewhat wheezing; expectoration tolerably copious and frothy, with only a very slight rusty tinge. Examination of the chest revealed dulness all over the left side, both in front and behind; heart's apex not displaced. Measurement of left side of chest at level of fifth cartilage, 16½ in.; of right side, 16 in. Bronchial breathing was heard in the left infra-clavicular and over the left scapular regions; over the rest of the left side the respiratory murmur was greatly diminished, but somewhat bronchial in character, expiration being more audible than inspiration; there was slight bronchophony in the left scapular region. The heart sounds were normal; no murmur was heard either in front of the chest or behind. Radial pulses and pupils equal.

The elevation of temperature continued for about fifteen days, when it gradually subsided to normal; the duskiness disappeared; the respiration was reduced to about 20, and the pulse to 80. The physical signs remained unaltered, but the heart's apex beat was displaced somewhat outwards and upwards, being felt about half an inch external to and in the nipple line. The patient was feeling much easier, and was allowed to get up a little each day; she still complained of some pain referred to the lower angle of the left scapula and down the left arm. Some blood-stained serum was drawn from the pleural cavity by a hypodermic syringe; but a day or two later no fluid could be drawn off by the aspirator. On the morning of May 27th the patient got up to have her bed made, and on getting into bed again was seized with a fit of coughing, bringing up about two pints of bright-red blood, which poured from the mouth and nose. When seen five minutes later she was found to be quite dead.

Necropsy.—On opening the thorax, the right lung was found to be quite healthy, but enlarged, encroaching over to the left side. The left lung was found collapsed and utterly airless, the pleural cavity containing about half a pint of fluid. The heart was normal; there was no valvular disease or hypertrophy. The whole of the arch of the aorta was found to be atheromatous, only small patches remaining of normal appearance. On the anterior part of the descending aorta, as it lay behind the left bronchus, was found a saccular aneurysm, about the size of a horse chesnut, lined with laminated fibrin, the opening into the aorta being about the size of a threepenny-piece. There was an opening from it into the bronchus about the size of a quill; the sac and part of the bronchus extending to the trachea were filled with clot; the distal part of the bronchus contained no clot, but only blood-stained mucus. There was very little induration of the tissues around the sac. Liver and other organs normal.

Guernsey.

TWO CASES OF RUPTURE OF THE HEART.

By A. WITHERS GREEN, M.R.C.S., L.R.C.P.

CASE 1.—E. T. H——, aged seventy-seven, a heavy man, went to bed as usual one night in October, 1881. On the servant bringing him in his breakfast next morning, he found him dead in his bed. The deceased was known to be somewhat eccentric; he was said to be subject to fits of some kind, and to have had rheumatism in 1878. He was a revising barrister. A post-mortem examination showed the brain and lungs to be healthy. The heart was dilated and flabby, the aortic valves containing some chalky deposit. The right coronary artery was thickened, and felt like a cord from outside. On stripping it up from the aorta, a recent but ante-mortem clot, an inch long, was reached, and beyond it a much older, tough, adherent clot; further on still was an extravasation of blood through the posterior wall of the right ventricle. There was blood between the muscle of the heart and the visceral layer of the pericardium, and a pint of blood, half of which was clotted, in the pericardial sac. It would seem that the atheroma in the right coronary artery had led to almost complete plugging of the artery, but it was the fresh clot completely occluding the artery which probably caused the rupture.

CASE 2.—W. J. H. W——, aged sixty-six, a well-made man, on May 7th was sitting listening to a debate, as was his wont, in which he never took any part. Suddenly he fell off his seat, was laid flat on the ground by those nearest him, gave a few deep inspirations, and expired. The deceased was a retired engraver, and was believed to have lived a steady life. Three days before his death he complained of pain at his left side, but would see no doctor. At the time of his death he was drinking gin, instead of his usual beverage of malt liquor. On post-mortem examination, the left pupil was found to be dilated, and the muscles of the left side of the face appeared as in facial paralysis. The vessels at the base of the brain were very atheromatous. The heart weighed twenty ounces. The left ventricle, forming the greater part, was much hypertrophied and rather dilated towards the apex. At the apex, on the septal side, was an irregular laceration of the muscular substance running through into the right ventricle, and also outwards into the sub-pericardial fat; both this and the edges of the laceration were infiltrated with blood. The pericardial sac contained about a pint of clotted blood. The valves on both sides were healthy, though the aortic and mitral valves were slightly thickened with atheromatous deposit. The first inch of the aorta was also moderately atheromatous, and the coronary arteries were excessively calcareous, both of them being narrowed in their main trunk. The branch running down the anterior aspect, corresponding to the septum and to the laceration, had its coats changed at more than one spot by altered blood-colouring matter of old date. The muscular tissue, notwithstanding the disease of the vessels and the laceration, appeared to be very good; its colour was of a natural deep-red, and it displayed no unnatural softness or fatty change. The cause of death being ascertained, no further investigation was considered necessary as regards other organs.

MEDICAL MISSION WORK IN KASHMIR.—At the hospital at Spinagar 5402 new patients were registered during 1883 and a total of 12978 visits paid. The number of in-patients was 391, the average stay of each of these being twelve days. In the Leper Asylum thirty-two patients were treated, seven being operated upon. The financial condition of the institution is satisfactory, and the year closed with a considerable balance in hand. Dr. Neve, in his report, states that such diseases as phthisis, pneumonia, pleurisy, rickets, scrofula, and aneurysm, are in Kashmir very rare, almost unknown, notwithstanding cold, poverty, insufficient food and clothing, overcrowding, and syphilis.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nullaautem estalia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

CASES OF FRACTURE OF THE BASE OF THE SKULL.

(Under the care of Mr. BRYANT.)

THE following series of cases of fracture of the base of the skull illustrates some of the more important complications attending this lesion :—

CASE 1. *Fracture of Base of Skull; Hæmorrhage from Left Ear; Right Facial Paralysis; Recovery.* (From notes by Mr. Hilbers.)—John C——, aged sixty-three, a warrant officer, was admitted on Nov. 2nd, 1882. He had been knocked down by a horse and cart, and was brought to the hospital insensible. Soon after admission he became sensible, but seemed dazed and was very sick. There was no superficial wound of the scalp, but there was copious hæmorrhage from the left ear. On the following day he was sensible, but complained of pain in the head and stiffness about the right arm. He was still giddy, and had been sick several times. There was paralysis of the right side of the face. The pupils were equal and acted well to light. Temperature 98·2°; pulse 80. Ordered an ice-bag to the head, and to have five grains of calomel at night. On the 7th he complained of throbbing pain in the head and pain at the back of the eye. On the 11th he slept and ate well, and the paralysis had almost entirely disappeared. On Dec. 5th he was discharged well, but was advised to keep quiet for five or six weeks.

CASE 2. *Fracture of the Anterior Fossa; Subconjunctival and Nasal Hæmorrhage; Separation of Lower Epiphysis of Radius; Death; Necropsy.* (From notes by Mr. F. Knaggs.)—James H——, aged twelve, was admitted on February 24th, 1883. He was sliding down the balustrade of a warehouse, when he fell from the third floor. On admission, at 2 P.M., he was quite insensible; pupils dilated and unequal, the left being the larger; no bleeding from the ears, but some from the nose and mouth (he fell upon his face); respiration irregular, but not of the Cheyne-Stokes character. The left eyelid was much swollen, and the lower lid was of a bluish-black tint. There was a slight puffy swelling of the anterior half of the left temporal fossa. There was, in addition, the typical displacement of a Colles' fracture of the lower end of the radius; crepitus not felt. The right knee was slightly flexed and passed over the front of the left leg. There was very little enlargement of the knee-joint, but fluid could be felt on both sides of the patella. At 4 P.M. the right pupil contracted and dilated in a rhythmical manner without reference to light. At 5 P.M. both pupils contracted and dilated alternately; both eyes turned to the right, and then a twitching of the whole eyeball occurred, and the whole eye was markedly directed outwards, but occasionally there was a return movement of the eyes to their proper position. On the left side the subconjunctival hæmorrhage was very distinct. The eyelids were difficult to open on account of swelling. Respiration 28; snoring as in normal sleep. Well-marked anchylosis of right knee. At 11 P.M. the skin was bathed in perspiration; loud rhonchi could be heard all over the chest; no spasms or twitching.—Feb. 25th: Restless; respiration stertorous and regular. At 1 P.M. the respiration was rapid and irregular; limbs perfectly flaccid.—26th: The patient died at 12.5 P.M. The temperature rose more or less regularly from 96·6° on Feb. 24th to 105·4° on the 26th, the time of his death.

Necropsy.—There was a contusion about the left orbit, and a fracture of the left orbital plate of the frontal bone. No injury to the brain was observed. There was a fracture of the styloid process of the ulna, and separation of the lower epiphysis of the radius backwards. The organs were healthy, with the exception of a slight hæmorrhagic effusion below the capsule and under the surface of the liver. There was no hæmorrhage into the left orbit. The fracture extended obliquely backwards and inwards on the orbital plate of the frontal bone to the cavernous sinus, rupturing the ethmoidal vessels, as the ethmoidal bone was seen to be implicated in the sinus. No inflammation in the membranes existed.

CASE 3. *Fractured Base; Crushed Mastoid Process; Escape of Cerebro-spinal Fluid for eight days from Ear; Fractured Lower Jaw; Recovery.* (From notes by Mr. Ironson.)—Walter Edward C——, aged six, was knocked down by a light van, the wheel of which went over his head. On admission, on April 20th, 1883, the child was found to have a large wound on the left side of the head, and the head and face were much bruised and abraded. There was a sero-sanguineous discharge from the ear. No paralysis existed, and the patient was quite conscious. There was a great depression on the left mastoid process, where the bone had been crushed, and also a considerable contusion about the left angle of the jaw. The right side of the neck and face was much swollen, and the right eyelids were completely closed up. On the 24th the discharge from the ear still continued, but the swelling of the face had subsided. The right eyelid was open and the pupils dilated, acting, however, equally, though sluggishly. On the 27th the child was much brighter, and the wound was healing up. A small pocket of pus was opened by incision at the apex of the mastoid process. On the 28th the flow of cerebro-spinal fluid ceased. On May 3rd the patient's face was much swollen on the left side, about the lower jaw. The dresser thought he heard crepitus near the symphysis. On the 8th there was considerable fluctuation observed near the fracture. Next day the swelling over the lower jaw was incised, and some white pus escaped. On the 21st there was some purulent discharge from the left ear, but the wounds were doing well. On June 16th the patient was discharged.

CASE 4. *Fractured Base of Skull; Scalp Wound; Facial Paralysis on Left, and subsequently on Right, Side; Mastoid Abscess; Incision; Prolonged Incoherence; Recovery.* (From notes by Mr. Humphreys.)—Mary Ann K——, aged twenty-four, was admitted on Dec. 5th, 1882. She was a drunken and bad character. On the evening of the 3rd she fell into a cellar, and was picked up and left to lie upon the floor all night. Next morning she was found to have bled a good deal, and to have been sick. On the evening of the 5th, as she had not recovered consciousness, she was taken to the hospital. On admission she was found to be collapsed and pulseless. Brandy was injected, which revived her, but did not restore consciousness. She had a scalp-wound to the left of the occipital protuberance of a punched-out appearance. There was slight left facial paralysis. She had a bruise on the chin and several bruises on her body. Her right pupil was larger than the left. She had perfect movement of her extremities. She was sick on admission, but not afterwards. Ordered iced milk, and five grains of calomel at once. On the following morning she was still unconscious, and fluid was escaping from the ear. Her face turned to the right, and resumed that position if moved. On Dec. 7th the paralysis of the face was more marked, but next day she became half conscious. On the 11th a great deal of pus and fluid escaped from the left ear. On the 12th she became very noisy. Two days later a slight fluctuating swelling appeared anterior to the ear. Above and below the mastoid process were two other swellings, and a third behind the ear, and discharging through it. On the 20th the patient was able to talk well. Two days later a great deal of bad smelling discharge escaped from the left ear. On the 27th there was less discharge from the ear, and the swelling in front of it had subsided. On Jan. 2nd the skin had become red over and around the ear; and on the 5th some necrosed bone could be felt in the abscess behind the ear. There was a slight rash on the face and forehead. On the 9th there was still some paralysis of the right side of the face. It was stated that the woman had been rather "silly" for the last few days, continually giggling and making disconnected remarks when spoken to. On the 13th, however, she seemed more collected. There seemed to be complete paralysis of the right side. On the 16th the patient had more control of the right half of the face. Some blood-stained discharge came from the abscess behind the ear. On the 22nd the patient was rather cyanotic. She complained of hunger and seemed more sensible. On Feb. 17th the woman went out, still half foolish, the wound behind the ear continuing to discharge. The occipital wound was healed, and in general health she was improved.

SOOREE CHARITABLE DISPENSARY.

FRACTURE OF SKULL; EXTENSIVE EXTRAVASATION OF BLOOD ON DURA MATER, PRODUCING COMPRESSION OF BRAIN; TREPHINING; PARTIAL RELIEF OF SYMPTOMS; DEATH.

(Under the care of Dr. G. C. ROY.)

DURING a drunken affray in a liquor shop, the patient was knocked down by a blow on the head from a heavy stick. He fell down insensible, but recovered consciousness after a while and was able to speak, but soon relapsed into a state of insensibility, in which condition he was taken to the dispensary next morning, and placed in bed.

When seen, the man was unconscious and very restless, tossing about in the bed, and he made no response to questions put to him. His pupils were normal; the breathing was at times natural, with a tendency to stridor. Pulse 72, small. There was no paralysis, but the limbs were rather rigidly flexed. The scalp at the junction of the sagitto-coronal suture was contused and puffy, and a depression was felt in the skull just outside this line and to the left. A crucial incision was made over the part, and the trephine applied over the depressed segment. A linear line of fracture traversed this space, but the depression was limited to the outer table, and was caused by the condensation of the bone from the force of the blow. A probe was gently passed between the bone and dura mater to scoop out any blood that might have been effused on its surface, but only a few small pieces of clot could be thus removed. The wound was dressed with cotton soaked in weak carbolic acid.

Next day there was a return of consciousness. The patient opened his eyes when spoken to loudly. He also put out his tongue, and pointed to his head as the seat of pain. He was, however, very dull and stupid, and could not speak. The progress was impeded next day by an attack of erysipelas, which travelled from head to face and neck, and after three days left him in a very exhausted condition.

For the next three days the patient's condition was hopeful. The wound was granulating, and he could answer questions by signs, though still unable to speak. He took a fair quantity of rice and milk. The rigidity of the limbs disappeared, but the pulse went up to 116, and a tendency to pneumonia of the left lung was manifested. On the ninth day after operation he was decidedly worse, the consolidation of the lung had progressed, and he died quietly at night.

Necropsy.—The extensive fracture passed across the squamous portion of the left temporal bone, and bifurcated at the external angle of the orbit, enclosing a bit of loose spiculum. Another line of fracture radiated upwards from the centre of the first, and terminated at the seat of operation. A thick layer of coagulated blood rested on the dura mater just opposite the temple—dimension 5 × 3 × 1 inch. At the lower part it was an inch thick and adherent, but gradually thinned on the top. Another patch of coagulated blood was found on the right side, opposite the parietal eminence. The dura mater and brain were healthy. The left lung was in the first stage of hepatisation. Other organs were healthy. The wound was healthy-looking.

Medical Societies.

ACADEMY OF MEDICINE IN IRELAND.

AT a meeting of the Medical Section held on May 16th,

Mr. JOHN B. STORY exhibited a patient suffering from Atrophy of both Optic Nerves, and Paralysis of the Olfactory Nerves and of the Sensory Division of the Right Fifth Nerve. The patient was an unmarried woman, aged thirty-two, who had enjoyed good health till the winter of 1882-83, when she began to suffer from a violent pain in her head. The pain later on became so violent as to confine her to bed, where she remained for some months in the spring and summer of last year. After a time she became completely unconscious, and when her consciousness returned (about July, 1883) she found her senses of sight and smell totally lost, and sensation absent from the right side of her face and the little finger and ulnar side of the ring finger of her right hand. She noticed at the same time a defect in the sense of taste in the anterior portion of the tongue at the right side. The examination of the patient completely established the truth of her statements, with the exception of the paralysis of the fingers, which did not then appear to exist. Corneal and conjunctival sensibility was completely absent, and the palpebral and lacrymal reflexes connected with it, while the cornea itself was perfectly healthy, and the tension of the right globe rather above that of the other eye. He considered the case to be one of cerebral tumour, but could not assign any definite locality to the supposed new growth. The atrophy of the nerves was undoubtedly produced by optic neuritis. He commented on the various theories explanatory of the connexion between papillitis and brain disease, and upon the current views as to the production of neuro-paralytic keratitis. The secretion of saliva from the right parotid gland was, so far as careful testing with vinegar could ascertain, completely abolished, that from the left gland being perfectly normal.—The CHAIRMAN (Dr. H. Kennedy) would connect the symptoms with a tumour at the base of the brain, implicating particular nerves or parts. There seemed to be less vomiting than usual in the case related.—Dr. C. J. NIXON considered that if Mr. Story was perfectly satisfied there was a lesion of both nerves of smell, and at the same time a lesion affecting some of the fingers of the hand and the forearm, it would be perfectly possible to account for all the phenomena that existed on the idea of an isolated tumour. It was remarkable to find that, with the implication of the sensory division of the fifth nerve, there was complete loss of the sense of taste on the corresponding anterior portion of the tongue. This was directly in opposition to a case recorded by Althaus, in which he excluded the fifth nerve as administering to the sense of taste on the antero-lateral region of the tongue.—Mr. STORY, in reply, said he had tried iodide of potassium for some weeks without alteration in the symptoms. In answer to Dr. Nixon, he pointed out that they were all familiar with the fact that loss of sense of smell followed paralysis of the sensory portion of the fifth nerve. In this case a probe might be put up the right nostril without the slightest effect; but if the left were touched in the same way, the patient shrank with pain. Assafœtida, valerian, oil of cloves, or ammonia, had no effect on the right side, whereas on the left the sensation was produced consequent on inhaling strong smelling salts.

Dr. C. J. NIXON read a paper on Reflex Paralysis, in which he summarised the different views which had been held in favour of and against the theory of this form of paralysis. He first examined the class of cases of paralysis which are usually cited as caused by reflex influence—viz., amaurosis from affections of the fifth nerve, and paralysis of the orbital nerves from a like cause. Having shown that these cases may be explained without reflex mechanism, he next examined the evidence as to the existence or non-existence of reflex paraplegia. Examining the views of Brown-Séquard, Gull, Leyden, and others, and the experimental observations on the subject, he directed attention to the absence of any true conception of the mode in which paralysis by reflex action is brought about, except we understand it to be produced by inhibitory influence; so that reflex paralysis, if it have any meaning, must be inhibitory paralysis. This name had at least the advantage of suggesting the way in which the phenomena of disease are produced. Dr. Nixon thought, however, that there was no necessity to admit the existence of an inhibitory paralysis, as, taking for instance the cases recorded as reflex paraplegia, they could arise in different ways—as an ascending neuritis, which sets up myelitis from extension of inflammation along the veins to the spinal cord, or from a lumbar-sacral neuritis, which descends along the sciatic nerves.—Dr. MCSWINEY called attention to the so-named reflex paralysis following wounds, of which Weir Mitchell had given many examples, including paralysis affecting the upper extremities, right or left, where a wound had been received in the lower extremities, right or left.—Dr. BENNETT considered Dr. Nixon's paper open to the objection characterised by lawyers as "pleading double." In his hospital experience Dr. Nixon had never seen a case of reflex paralysis, while he quoted instances of inhibitory nerve influence, which he held to be another name for reflex paraplegia. It was difficult, therefore, to follow his argument.—Dr. WALTER G. SMITH, looking at Dr. Nixon's conclusions as a whole, said his views must to a great extent be felt to be in accord with those of modern teaching, supported by the pathology of nervous diseases; so that very few, if any, physicians or surgeons would now accept Brown-Séquard's teaching in his interesting lectures on Paralysis of the Lower Extremities. Caution

must be observed in dogmatising too strictly as to what could or could not happen in the domain of the nervous system. Dr. Nixon did not sufficiently allow for the extremely important effects of local sensory irritations, which include both the skin and internal skin or mucous membrane—in other words, stimulation of a limited area of the sensory nerves. The curious thing was that, no matter what part of the skin was stimulated, similar effects followed. It was known that death occurred during the early stage of inhalation of anæsthetics. Again, tickle the inside of the thighs and in a bright light the pupils would be seen to dilate. It was difficult to say what channel that influence travelled up, yet it was the influence of reflex action. Indeed, it was well known that the vomiting centre could be approached by many channels. Modern teaching had undoubtedly narrowed the field of reflex diseases, and while they should be thankful to those inquirers who had cleared away so much obscurity, it was too soon to urge anything positive as to the phenomena being a reflex arrest of function, without speculating that the mechanism by which it was produced might not arise in the body.—The CHAIRMAN called Dr. Nixon's attention to a clinical aspect of this question. He had himself put on record a host of cases of children, from five to seven months old, who had suddenly lost power of one arm, and in these the scarification of a gum or an active purge produced a cure at once. Thus the reflex paralysis was in these cases due to irritation of the mouth or the accumulations in the intestines.—Dr. NIXON replied that he had used the term "inhibition" first, as a step in getting rid of the theory of Brown-Séquard that the paralysis was due to reflex spasm of the bloodvessels of the spinal cord; if not to that, it was due to something else, a number of things, and he took inhibition as one to which it might be due; and he had said there was no necessity for introducing this explanation of the theory of disease at all, inasmuch as it had been established that the paraplegia assumed to be reflex was due to causes which had been ascertained, as an ascending neuritis or a descending neuritis, or a neuritis established by the travelling up of inflammation along the veins. The received explanation of the results of the operations he had cited was that they were due to what was understood as the phenomenon of inhibition. If they were not satisfied that the cases of paraplegia recorded had most distinct and positive pathological lesions to explain them, then the theory of paralysis by inhibition was the one that would satisfy the scientific requirement best. But in the absence of necessity there was no use introducing a new term into medical pathology. With regard to Dr. Walter Smith's observations as to the effect of stimulation, Brown-Séquard had mentioned that peripheral stimulus might act in three different ways—it might influence secretion, or the condition of the bloodvessels or of the muscles. In his paper before the section, he had confined his observations to the condition of the muscles that might be said to be influenced by peripheral irritation. He did not discuss the condition of the bloodvessels such as would be brought about from irritation of an extensive surface of the skin following a blister, &c. Dr. Smith seemed to have dealt with spasms as being connected with paralysis. There was not the slightest doubt that peripheral irritations of various kinds—worms in the intestines and teething—produced convulsive phenomena; but it was quite a different thing with irritation transmitted to the cord. Irritation was supposed to pass to the motor area, and yet the usual result was not attained. Although he had seen a great many cases of paralysis, he had never seen one that he could connect with any of those cases of local irritation such as teething, or that got well on suddenly lancing the gum, and he did not see why paralysis should be cured by such a simple procedure. The object of his paper was to show that such a thing was a physiological impossibility.

On the motion of Dr. Grimshaw, the remaining papers on the agenda were, for want of time to be read, referred to the Publication Committee.

CAMBRIDGE MEDICAL SOCIETY.

AT the meeting on July 4th, Professor Humphry, M.D., F.R.S., in the chair,

Mr. BALDING (Royston) exhibited a specimen of Sarcoma of the Left Tonsil, taken from a female aged fifty-three, who first came under observation on Aug. 7th, 1883, in consequence of sudden and profuse hæmorrhage from the mouth, which appeared to be arterial. At this time there was sore-throat of a month's duration, with some ill-defined indurated swelling in the left submaxillary region, great fetor of breath, and complete fixity of the lower jaw, which rendered any examination of the mouth or throat impossible. This alarming hæmorrhage soon subsided, and only recurred once, to a less amount, ten days later. On Nov. 8th the swelling in the neck had slowly increased, without having become either very painful or tender, and some deep-seated fluctuation now appeared to indicate the existence of pus. This was easily reached and evacuated, and it was estimated that an ounce was let out on the first day. This gave some slight relief, and at the end of a week the abscess had completely healed. Ten days later a second abscess was detected and opened, and this healed rather quicker than the first. These abscesses were just on a level with the upper margin of the thyroid cartilage, the second posterior to the first. There was no subsequent suppuration. During the time of formation of these abscesses there was considerable swelling of the tongue, especially in the left half, so that for a few days it could be scarcely kept within the mouth, but after the second abscess was opened the swelling subsided, and was almost immediately followed by further swelling of the tongue, this time principally affecting the right side, so that it was protruded from the mouth and firmly grasped by the teeth. The swelling subsequently subsided so as to allow the tongue to be returned within the mouth. The patient died on Jan. 12th; the swelling in the neck had for a fortnight previous to death encroached on the trachea and caused some difficulty in breathing. During the whole course of the case the patient was able to take fluid nutriment with but little difficulty. The necropsy showed a firm growth involving the left tonsil; it extended into the submaxillary region, infiltrating the glands and surrounding structures. The epiglottis was also partially destroyed. Microscopically, the growth proved to be a round-celled sarcoma.

Mr. MANBY (East Rudham) related a case of Morphia Poisoning unsuccessfully treated by Hypodermic Injection of Atropia. At 11.30 one evening he was hastily summoned to a lady who was known to be suffering from internal cancer, with considerable intra-peritoneal effusion &c. He found her lying on her back, with livid face, dropped lower jaw, closed eyes, and apparently dead. Shortly after, respiration commenced, in Cheyne Stokes' manner, with palatal stertor. The skin was moist; pulse 108, soft, and rising with the breathing to 120 or more; pupils contracted to pins' points, and insensible to light; conjunctivæ insensate to the touch. The most violent irritants applied to the trunk had no effect in exciting reflex action. On inquiry, he was informed that the patient had that evening returned from London. The previous evening she had an ineffective hypodermic injection of morphia, in consequence of which the nurse, obeying instructions given her to increase the dose if necessary, without any clearly defined limit, had about 10 P.M. injected a larger quantity, corresponding to at least a grain and a half. It was clear also, from the account given, that the needle had not been inserted on the previous occasion. The symptoms supervened very soon after the injection. Mr. Manby made use of all the ordinary means to arouse her, but without success. He then, at 11.45 P.M., injected beneath the skin of the arm five minims of the liquor atropiæ, without effect on the pupils or respiration. At 12 P.M. he injected another ten minims, which had a slight stimulating effect on the pulse, so at 12.15 he added ten minims more. Then, after using a powerful magneto-electric current to the præcordium, another injection of five minims was repeated. No improvement followed, and the patient died about 1.30 A.M., three and a half hours after the morphia injection. The amount of liquor atropiæ injected was thirty minims, or a quarter of a grain of atropine.

Dr. RANSOM related five cases of Croup. He said the term "croup" was used to indicate a group of symptoms. All the cases were children under six years of age. Three died and two recovered. The trachea was opened in one of the fatal cases. The symptoms in all the cases were very much alike. There was at first little or no constitutional disturbance, and in two cases at the beginning no rise of temperature. The fever in no case exceeded 101° F. the tonsils were swollen, and there were patches of exudation on them and on the aorta, but very little appearance of inflammation. All the fatal cases died from asphyxia; in one,

after tracheotomy had been performed, the disease spread below the tube. The two recoveries were brothers. The treatment was various. The two latter took from one to two minims of a strong solution of perchloride of iron every hour. In no case was any contagiousness exhibited. If these cases were diphtheria, how were the exceedingly mild constitutional symptoms to be explained? Perhaps by supposing that although the disease were in truth diphtheria, yet the amount of poisoning was small or the number and reproductive activity of the micrococcus limited; hence also its non-contagiousness; but the local disease was, in young children, for anatomical reasons, sufficient to cause asphyxia.

Reviews and Notices of Books.

Die Tuberculose der Knochen und Gelenke. Bearbeitet von FR. KŒNIG. Mit 18 Holzschnitten. Berlin: August Hirschwald. 1884.—This excellent account of the tubercular diseases of the bones and joints is founded on the results of personal observation of the author; it is dedicated to the distinguished Volkmann. We may perhaps best indicate the scope and character of this work by describing some of the contents of the chapter on the treatment of tuberculous affections of the parts under consideration. The author says in the beginning of the section in question, that since the white swelling of joints is regarded as an example of tuberculosis, it is obvious that the treatment of this localisation of the disease must be conducted on the same general principles as guide us in considering the treatment of any other tuberculous disease. Amongst other objects, one of our chief aims must be to destroy the infective agents, the bacilli and their spores, by means of specific remedies. Up to the present these specific agencies have not been discovered. Whilst admitting that the preparations of arsenic, iodine, and mercury, with cod-liver oil, saline baths, and the sea coast, are beneficial in many cases of tuberculosis of any part of the body, Dr. Kœnig does not place much reliance on them, for he thinks many cases go on just as well without their employment. He has not had any experience of Davos and the mountain cures in surgical cases. Contrary to his earlier teaching, Kœnig does not now look with favour on the injection into the diseased tissues of solutions of carbolic acid and similar agents. The author is an advocate of the operative interference in almost all cases of tubercular bone and joint disease. In cases where the diagnosis of a local affection of any part of the articulation is probable, the removal of the diseased centre is recommended by simple gouging or scraping away, under proper precautions of strict cleanliness. Where the extent of the disease necessitates it, resection of a greater or less amount of the diseased structures is regarded as the proper line of treatment. The bloodless method of operation is highly spoken of, and the employment of iodoform dressings is strongly recommended. Free incisions are praised in suitable cases. The results of timely resection in the author's hands have been very satisfactory. Separate chapters are devoted to the consideration of tubercular disease in each of the principal points of the body—viz., hip, knee, ankle, tarsus, shoulder, and elbow. With regard to the results of excision of the hip-joint, the author says but little here, promising to say more at the Surgical Congress, but he is evidently inclined to look favourably on the operation.

Specificity and Evolution in Disease. By W. J. COLLINS, M.D., B.S., &c. London: H. K. Lewis. 1884.—This paper, which was read before the Abernethian Society of St. Bartholomew's Hospital, is well worthy of perusal. It is an attempt—and not altogether an unsuccessful one—to apply the evolution theory to the explanation of the relations between specific diseases, and to advance facts in support of the doctrine that there is no sufficient ground for the hard-and-fast lines of demarcation between these diseases and simple inflammatory affections that are generally adhered to. We cannot but think that Dr. Collins in some places pushes his views too far; as, for example, where he implies that tubercle has been robbed of its specific nature by the pneumonic doctrines of Niemeyer, or that gonorrhœa can arise *de novo*. Indeed, from the standpoint he assumes, it would almost appear as if to be an evolutionist one must also be a heterogenist; but we hold that this does not necessarily follow. The hypothesis that most of the varied forms of disease now known to us have sprung from some ancestral type, and that modifications in their nature have largely depended upon the conditions around them, is not improbable, and harmonises with the biological doctrines which are making so much progress in respect to the causes of disease. It is a different matter, however, to admit that the specific distinctions which have led clinical observers to separate diseases from one another, and which pathological inquiry confirms, have no essential basis at the present time. To do him justice, however, Dr. Collins admits there is a relative specificity, but not an absolute one; and if only he would follow biologists in observing more caution in receiving evidence upon the *de novo* origin of morbid germs, we see nothing in his able argument from which we need seriously differ. He has done good service in directing attention to the subject, which is capable of very wide application.

Sleep-walking and Hypnotism. By D. HACK TUKE, M.D. London: J. & A. Churchill. 1884.—This brief essay is given in memoriam of William Samuel Tuke, the author's lamented son. Six years ago Dr. Tuke and his son prepared and printed a series of questions on the subject of sleep-walking, which were then widely circulated; but from two or three causes nothing much came of the attempt to enlarge our knowledge in that direction. Dr. Tuke now again takes up the subject, and has written a readable, entertaining, and instructive account of sleep-walking. The circular of inquiry has been reproduced at the end of this account. A case of spontaneous and one of induced sleep-walking are next described. The section following is concerned with the mental condition in hypnotism or artificial somambulism. To form an idea of the cerebro-mental condition of the hypnotised is not a difficult matter for the speculative mind, but whether such an idea would stand the test of ordinary objections is more than doubtful. Taking Hughlings Jackson's standpoint of mental phenomena regarded as matters of increasing complexity and diminishing stability or organisation, it is not difficult to conceive of the suspension or continuance of various acts of the mind under the influence of several forces, inhibitory or otherwise. But whether such views are merely different modes of stating the same problem, or truly, though but partially, explanatory in their character, is more than we can say. It would land us into a hopelessly long discussion if we attempted to unravel the knots of the skein which we have produced by saying what little we have. We can, however, confidently recommend Dr. Tuke's little work to the attention of all interested in psychological matters.

Western African Hygiene; or, Hints on the Preservation of Health and the Treatment of Tropical Diseases, more especially on the West Coast of Africa. By CHARLES SCOVELL GRANT, M.D. Pp. 51. London: Stanford. 1884.—This is the second edition of a work intended for the use of non-professional persons who are called upon to reside on the West Coast of Africa. Its object is not to supersede skilled medical advice and assistance when these can be obtained, but to give such instructions as may prove useful in preventing disease, and in treating it when such assistance cannot be procured, or until it is available. The book

has the great merit of being written in plain intelligible language, and the instructions for the prevention of disease and for its treatment, both during the active stage and the period of convalescence, appear to be judicious.

A Medical Guide to the Principal Health Resorts of Northern England. With new chapters on Whitby, Scarborough, Redcar, Saltburn, Harrogate, &c. By RICHARD ELLIS. Pp. 175. London: Scott. 1884.—This is a new edition of a guide-book published last year. It gives an account of the more important health resorts in the North of England, classified into seaside, inland, and mountainous or upland health resorts. It cannot fail to prove useful in helping persons to select a place where they may spend their holiday pleasantly in England, with the advantages of sea-bathing or of mountain air, as may be most desirable. It contains a good deal of historical information regarding the various places described, the objects of interest in their neighbourhood, and the season of the year best suited for their enjoyment; but it is more of a popular than a professional guide, and would advantageously bear pruning in some of its flowery descriptions.

Health Studies. By H. SINCLAIR PATERSON, M.D. Pp. 209. London: Hodder and Stoughton. 1884.—Although no information is given on the subject, we are disposed to think that this volume consists of lectures addressed to some society composed of young men, upon various subjects connected with health. It is well written, contains much information and sensible advice, and the tone throughout is good. It is a work which should prove useful to the class for whom it was apparently written.

La Santé du Peuple. Par L. EVRARD. Pp. 229. Bruxelles: A. B. Lebegue.—This is a work to which the Royal Academy of Science &c. of Belgium awarded a prize of two thousand francs. It treats of the general rules for preserving health; nursing the sick, and the aid to be given in cases of sudden illness, and of accidents and injuries; the measures to be adopted in epidemics; the subject of small-pox and vaccination; and the organisation of a public health service. It appears well calculated to spread sound information among the educated classes of Belgium on the subjects of public health and the first assistance in sudden illness and accidents.

The Laws of Health: Physiology, Hygiene, Stimulants, Narcotics. For Educational Institutions and General Readers. Copiously illustrated. By JOSEPH C. HUTCHISON, M.D. Pp. 223. New York: Clark and Maynard. 1884.—The object of this work is to supply a useful and intelligible text-book for grammar schools, and those of a higher grade, on the subjects of physiology and hygiene. We regret that we are unable to congratulate the author on having effected the important object he had in view. The book does not appear to us to be one which would be generally understood by the class of boys who attend grammar schools, and some of the illustrations would be very likely to mislead.

The New York Medico-Legal Journal. June, 1884.—This volume contains several papers of great interest. That by Dr. H. Maudsley on the Moral Sense and Will in Criminals is written in the author's best style. Dr. C. H. Hughes gives a contribution on "Moral" Insanity. The article of greatest value, looked at from a practical standpoint, is by Dr. G. Johnson on Poisoning by Canned Foods. The writer relates cases of poisoning from the ingestion of tinned tomatoes, and conclusively proves that the deleterious agent is a mineral poison, either verdigris derived from copper kettles used in preserving fruit and vegetables, or chloride of zinc employed to solder on the caps of the tins. Dr. J. M. Carnochan has a brochure on Cerebral Localisation in relation to Insanity. Notes of Transactions of Societies, reviews of current literature, and other miscellaneous matter, complete an unusually good number of this excellent journal.

"REARING OF HAND-FED INFANTS."

To the Editor of THE LANCET.

SIR,—I read with much interest the abstract of Mr. Owen's lecture on the above subject at the Health Exhibition in last week's LANCET, but I was disappointed at his laudation of diluted cow's milk with a little sugar and a pinch of salt as a satisfactory substitute for the natural maternal aliment. My own experience at least does not confirm his, and I have known many infants who would have succumbed to deranged stomach and bowels, and virtually have died of starvation, had they been kept to the diet recommended by him.

Since the publication in THE LANCET of March 16th, 1878 (p. 390), of Dr. Frankland's method of preparing artificial human milk, I have always resorted to this for all delicate infants deprived from any cause of natural nourishment. Dr. Frankland states that he "saved the life and thoroughly nourished one of his own children for the year during which he consumed it." He states that "human milk is sweeter, but contains less casein and salts than cow's milk; the butter is about equal in quantity." The casein is in excess by about one-third in cow's milk; this it is which causes the digestive troubles of the little one, great cakes of hard curd being often rejected by the stomach, or, if passed on to the bowels, setting up irritation, diarrhœa, or enteritis. If you simply dilute the milk with an equal volume of water, you may reduce the casein to a quantity sufficient, but you rob it of half its proper amount of butter and saline matter, both of which are most important for the infant's growth and nourishment. What is requisite to be done? Simply to remove one-third of the casein, and add the required amount of sugar; no "pinch of salt" will be required if the milk is not diluted, as the cow's milk contains sufficient saline matter. The preparation of this artificial milk is accomplished in about ten minutes, and it will be gladly undertaken by even "the lazy nurse," for the sake of the better health and rest acquired by the baby thus nourished. To prepare it, allow half a pint of new milk to stand for about twelve hours; remove the cream and add it to one pint of new milk, as fresh as possible. Into the half pint of skim-milk put a piece of rennet about an inch square, to be obtained of the butcher. Set the vessel in warm water till the milk is fully curdled, which requires from five to fifteen minutes, the rennet being removed as soon as curdling commences, and put into an egg-cup for future use, as it can be employed daily for a month or two. Break up the curd thoroughly and separate the whole of the whey, which should be rapidly heated to boiling, when a little more casein separates and may be removed by straining; 165 grains (about two teaspoonfuls) of powdered sugar to be dissolved in this hot whey and the sweetened fluid added to the pint of new milk (and cream). It is then ready for use. With Dr. Frankland I can affirm that I have saved the lives of sundry children that would assuredly have died without this artificial milk. The little extra trouble is thought nothing of by mother or nurse who has once tried it. The above quantity is generally sufficient for a new-born infant for the twenty-four hours, and, except in the hottest weather, will keep sweet for a similar period. My apology for thus troubling you must be my desire that it should be better known and tried by practitioners before recommending the endless variety of biscuits and infants' food, as it is, indeed, almost a *fac simile* of the natural nourishment.

I am, Sir, yours truly,

Spondon, Derby, Aug. 18th, 1884. B. WALKER.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—At a meeting of this Association held on the 14th inst., Dr. Hime, who presided, made a few observations on woolsorters' disease—a subject which has lately been productive of a good deal of interest and anxiety amongst medical men and others. Dr. J. M. Fox afterwards made some remarks on a recent outbreak of fever at Bowdon, and, referring to the conviction for libel of the newspaper editor who published the medical officer's report, urged the necessity of an amendment of the law of libel as applying to such "discharges of an inconvenient public duty." A brief discussion followed.

THE LANCET.

LONDON: SATURDAY, AUGUST 23, 1884.

WHILE cheerfully recognising the extreme interest of Dr. KOCH'S investigations into the nature and cause of cholera, of which we have been gratified to give our readers an early and full account, it is quite obvious that they do not at present supply the material for much guidance in the treatment of this much-dreaded disease. It is fair at least to hope that we shall not have many cholera cases to treat. To be forewarned is to be forearmed, and certainly our sanitary authorities have had warning enough. The disease is not one which overpowers us all at once. It has to be introduced from an infected place more or less directly, and to spread slowly from one individual to another and from one house or place to another. We may fairly trust to our medical officers of health giving a good account of any suspicious case, and we may rely on medical practitioners everywhere cheerfully co-operating with them in their efforts for isolating cases and restricting the spread of a disease which appears, despite Dr. KOCH'S somewhat discouraging conclusions as to the value of disinfectants, to be so much more preventable than curable. When the College of Physicians ventures to assure the public that, "with reasonable precautions," those who wait on the sick are not more liable to the disease than others, it certainly elevates the question of such precautions into the first rank of importance. We the less dwell on this part of the subject, as it may be assumed that every sanitary authority, by public instruction, will place before its constituents the best ascertained facts as to the means of disinfection. Where excreta and infected garments cannot be destroyed by fire, which is certainly the most satisfactory way of dealing with them, we should recommend that the excreta be received into a vessel containing fluid consisting of one part of carbolic acid to nineteen of water, or of a solution of sulphate of iron (green vitriol) of the strength of one ounce to a pint of water. The excreta must be kept in these solutions three or four hours. Stained and infected linen should be soaked in such a solution of carbolic acid and hot water for twenty-four hours and then boiled.

Our object just now, however, is not so much with questions of disinfection as with strictly medical questions of treatment. There is one point on which Dr. KOCH is in practical agreement with medical practitioners—that is, the wisdom of rectifying all ordinary gastric and intestinal disorders during the prevalence of cholera. Nothing is more striking in his conclusions than the bactericidal function of the human stomach when in health and when reasonably treated by its owner. He never found the comma bacillus in the vomited matters, except where he had reason to suspect that they contained accidentally some fæcal contaminations. The stomach which is affected with gastric catarrh, whether from drinking or over-eating, chill, or other cause, is likely to supply an amount of mucus-protection to the cholera bacillus which will secure its transmission unkilled into the intestine, especially the ileum, there to do its deadly work. It is an old point of medical observation that drunkards and other disorderly livers fall an easy prey in times of cholera. They will do well to mend their ways in time—to live "soberly and righteously,"—and, if any indigestion or dyspepsia survive such a change in their habits, to apply without delay to their medical advisers. It is a vulgar impression in cholera times that nips of brandy have a preventive effect. Nothing can be more incorrect. Such a practice would be well calculated to produce that gastric catarrh which, as KOCH and all practitioners of experience agree, is most apt to give the cholera poison its best chance of operating on the intestine.

There is nothing in KOCH'S researches contradicting the general opinion of the profession that by far the best thing in cholera epidemics is to take measures to bring cases of diarrhœa under early treatment, and to employ such remedies as are of a corrective and astringent character. The College of Physicians has done good service in recommending that in any place visited with cholera house-to-house visitation should be instituted. In this way not only are cases of diarrhœa prevented from drifting, but opportunity is gained for seeing the homes in which they occur. The nature of the remedies to be used for diarrhœa will vary somewhat according to the nature of the case and the judgment of the practitioner. In some cases of gastro-intestinal catarrh, with little evacuation, such medicaments as bismuth and soda will be enough to correct the disorder, but where copious fluid evacuations from the intestine have begun they should be regarded as in themselves serious and first objects of treatment. No doubt there are cases of cholera, especially in the East, fatal without these, or in which the evacuations are disproportionate to the shock and collapse. But this is not the rule in this country, and indeed is exceptional. In the great majority of cases where the evacuations can be early controlled the constitution of the blood is preserved and the disease may be cured. Where there is not much vomiting, the chalk mixture with a few minims of tincture of opium will often suffice. In later epidemics, undoubtedly, the dilute sulphuric acid mixture has been rather preferred, especially where there is much sickness. More effective than either in many cases, and more easily retained in cases of sickness, is a small pill of solid opium and acetate of lead in the proportion of half a grain, to two, three, or even four grains of acetate of lead. The house-to-house visitor, who of course would be a qualified practitioner, should carry such pills with him. The diet should be of a light and unirritating character; the patient should lie in bed, and have a large linseed-meal poultice applied to his abdomen; cold water should be freely allowed in quantities short of those which might excite vomiting; where that is not borne, ice is of great use.

When the stage of diarrhœa is passed, much more complicated changes and lesions have to be realised, and a wise treatment becomes increasingly difficult. It is not the least valuable part of KOCH'S investigations to have given more precise pathological definition to these changes, and to have shown us that, besides deadly collapse, with lividity, suppression of urine, pyrexia, &c., we have in a large majority of cases remarkably "severe intestinal lesions" to deal with—dark reddish-brown colour of the mucous membrane, with superficial

hæmorrhages, or the mucous membrane necrosed or covered with diphtheritic patches; the contents of the intestine being sanguinolent, ichorous, and putrescent. Our readers would do well to refer to THE LANCET of the 9th inst., p. 249. It would be folly to dogmatise on the treatment of such conditions any more than on those of typhoid fever. Immense good is done by realising the complications of the case and the possibility of doing harm by expecting immediate and instantaneous changes from vaunted or specific remedies. Opium here is out of place. Stimulants, too, can only be used with great caution. Food must be of an unirritating character. Mr. MACNAMARA recommends warm enemata of beef-tea with brandy every third hour in cases where the purging has abated. Food given by the mouth may be iced, and the powers of life must be husbanded by warmth and rest.

The difficulty in the treatment of the advanced stages of cholera will have two lessons for all sensible people:—First, that what is difficult for doctors must be much more so for those who are unlearned in disease; and, secondly, that their whole efforts should be directed to giving the profession every assistance in promoting the early treatment of cases, and diffusing general intelligence as to the laws which regulate the spread of the disease.

IN accordance with the recommendation of the Committee presided over by Lord MORLEY, the system of examination of army medical officers previously to promotion has been reintroduced into the service. We always held that the abolition of these examinations was a mistake, and therefore think this a step in the right direction. But we regret that we cannot speak in terms of unqualified praise of the regulations upon the subject just issued with the *Army Circular* of August 1st. They are divided into two sections. 1. Rules for the examination of surgeons previous to attaining the rank of surgeon-major, which may be taken at any time between their fifth and tenth year of service. The examination is to embrace (1) surgery, operative and practical; (2) medicine and pathology; (3) hygiene; and (4) duties of executive officers during peace and war, at home and abroad and at sea. There are certain exemptions from the examination which it is unnecessary to detail. But there are two very serious objections to the rules as laid down. First, it is not stated whether the examination is to be optional or compulsory; nor is any penalty attached to the refusal or neglect to undergo it. If there is any practical difficulty in applying the new rules to officers appointed under the warrants of the last ten years, it ought at least to be made clear in what manner they are to operate in the case of those now entering the service. Nor is it stated when these rules are to come into force. It surely cannot be intended to subject officers to such an examination without giving them due time to prepare for it. But the second objection appears to us a much more serious one. It is enacted that "a certificate will be required from a recognised teacher of surgery in any medical school at home or abroad in which operative surgery is taught, showing that the medical officer has gone satisfactorily through a complete course of operative surgery during the period within which the examination must be taken, and that he is a competent operator." But nothing is said of the manner in which such certificate is to be obtained. Is every officer to have a certain amount of leave, over and above that usually granted, to enable him to attend such "recognised teacher of surgery"? Is the expense of this "complete course of operative surgery" to be defrayed by him or by the War Office? And in what manner are the necessary subjects for operations to be obtained? We confess that in the absence of any explanation on these points this new rule appears calculated to inflict a serious injustice upon the junior medical officers; and we trust, in the interests of the service, that it may be either abolished or very materially modified. Unless something is done in this direction, it will probably have the effect of preventing many of the surgeons from undergoing the examination. 2. The second section of the regulations contains "rules for the examination of surgeons-major of twenty or more years' service; the examination will be optional." But the option is so far modified that until the surgeon-major has passed the examination he will not be eligible for promotion to brigade surgeon and the administrative ranks. We consider this a very fair condition, as the subjects of examination are all such as a medical officer ought to know well if he is to discharge efficiently the duties of the higher grades. They relate chiefly to the organisation and administration of hospitals and to the duties of the medical staff corps, the relations of the medical and other departments of the army to each other, field service with troops, sanitary duties in peace and war, epidemiology, and the protection of sick and wounded against pyæmia, septicæmia, and all other forms of blood-poisoning, and their treatment when they occur. The examinations are to be partly written and partly *viva voce*, conducted by an examining board, who will record the questions and answers, and forward them with all the written documents to the Director-General, without expressing any opinion as to the result. We believe that this examination for the higher grades, if properly carried out, will tend to exclude incompetent officers from positions of serious responsibility, and will operate beneficially in the interests alike of the department and the service generally. But we trust the authorities may be induced to reconsider the rules laid down as to the examination of the surgeons, and to modify them in such a manner as will remove all ground for a complaint of injustice on their part.

IT is generally admitted that the British Pharmacopœia is an eminently unsatisfactory work. It has been unhesitatingly condemned by the highest medical authorities in the country. We have over and over again urged the necessity for placing it on a more satisfactory footing. At the recent meeting of the British Medical Association at Belfast it was criticised in unmeasured terms, and a resolution was passed urging the Council "to consider with as little delay as possible what steps should be taken to ensure that the proposed new edition be brought into more complete accord with the present state of medical knowledge." A committee was appointed to further this end, and to organise means for establishing a supplemental or semi-official list of remedies the properties of which might not have been sufficiently investigated to warrant admission to the Pharmacopœia itself. This list, added to or modified from year to year, would, it was thought, form the basis of changes to be con-

sidered by the sub-committee of the Medical Committee at their periodical revision of the official publication. The scheme has excited some discussion, and several well-known authorities have published their views on the subject. Dr. FARQUHARSON, speaking of the present Pharmacopœia, expresses a hope that something may be done to bring this antiquated volume into harmony with modern usage. By this, he explains, he means not the revision rendered necessary by self-progress and the introduction of those new drugs which have established their claim to popular favour, but a "drastic and thorough overhauling of every page," and the "summary ejection of useless and superfluous articles." "Nothing in connexion with materia medica," he says, "has surprised me more than the way in which many so-called remedies, which no one ever dreams of using, and which probably could not be found in case of need, are permitted to cling with the conservative tenacity of barnacles around our modern text-books." Dr. LAUDER BRUNTON endorses Dr. FARQUHARSON'S statements, and pleads for the introduction of more preparations, which shall be not only useful as remedies, but agreeable to the palate. At present, the medical man who writes a prescription is undoubtedly at a great disadvantage with one who dispenses his own medicines. The latter can remedy anything objectionable either in appearance or taste, whilst the former is almost entirely limited to the officinal preparations, many of which are abominably nasty. At the British Pharmaceutical Conference, held at Hastings last week, the President spoke of the necessity, long experienced, of a better Pharmacopœia, and claimed for pharmacists the right to participate in the production of this important work. He argued that they, as a body, knew more about the practical niceties involved in the preparation of medicines than anyone else, and reminded his hearers that in most countries the pharmacist was the only recognised dispenser of medicines, the practice of pharmacy being jealously restricted to those who made it a special study. This is a view of the subject deserving of careful consideration, although it is of course a mere matter of detail. What we want is a better Pharmacopœia, and if the Medical Council is unable or unwilling to accomplish the task in reasonable time, they must not be surprised if we look elsewhere for assistance.

IN conjunction with M. CHARCOT, M. PARINAUD has been engaged in studying the ocular disorders associated with disseminated sclerosis. (*Le Progrès Medical*, Aug. 9th.) The most common are muscular affections—a paralysis or paresis of the associated movements of the two eyes,—so that there is a difficulty in lateral motion and convergence. Thus, if the patient looks to the right or left without moving the head, the corneal margin does not reach the canthus, and the pupils tend to return to the middle line, owing to fatigue of the muscles. Nystagmus interferes with this observation, and, as both eyes are affected, there is no appreciable strabismus. Paralysis of convergence is readily determined. Diplopia is a frequent symptom, especially at the onset of rapid cases, disappearing after a month or two, either in reality or apparently, but it is less marked than in monocular paralysis. Nystagmus, the most important symptom, is due to the paralysis of associated movements, being excited by attempts at fixation, and more pronounced when the eyes are turned to the right or left. The nystagmus is not apparently related with the degree of paralysis; it is more likely dependent on an incomplete paralysis arising from a lesion of the centres governing associated movements. The vague facial expression so characteristic of this disease is accounted for by this derangement in ocular movements, for the physiognomy depends largely on the remarkable synergy that enables the eyes to travel together in all directions, their axes being constantly changed for accommodation to various distances. Ordinary paralyses of peripheral origin are rare; but M. CHARCOT has seen cases of ptosis. As to the iris, slight inequality of the pupils is not infrequent in the early stages, especially when the eye is at rest. Later, myosis is marked; but in either state the reflex contractions to light and accommodation are preserved—a point of importance in the diagnosis from tabes, of which the Argyll-Robertson pupil is one of the earliest and most characteristic signs. These pupillary reflexes may even be exaggerated in disseminated sclerosis, so that the pupils contract extremely, even if already myotic. It is held that this suffices to dismiss the idea of tabes from such a case, and to suggest disseminated sclerosis. The myosis of tabes with early abolition of light-reflex, and sometimes even of contraction for accommodation, is a kind of paralytic myosis; that of sclerosis with preservation or exaggeration of the same reflexes may be regarded as a spastic myosis. The analogy of these ocular reflexes with the tendon-reflexes in these two affections is therefore striking. As regards the optic nerve, M. PARINAUD points out that amblyopia occurs in this disease under three forms. In many cases it arises slowly; visual acuteness is about the same in both eyes, and the field is normal. There is a certain amount of dyschromatopsia for red and green, often an early and well-marked symptom. In many cases there are no papillary changes, but when advanced the papilla may be pale, especially in its temporal half. In the second form amblyopia develops rapidly, and leads to absolute but transient blindness. This may pass away to such a degree that the patient can read fine type; but the colour-blindness persists, the visual field is contracted, and the optic discs remain notably white. M. CHARCOT has never seen a case of persistent blindness, although the atrophy of the optic nerve may be quite obvious; and this affords a contrast to tabetic atrophy. In the third form the amblyopia and nerve change is unilateral; but this is rare, and is probably due to sclerosis of the nerve itself, the bilateral variety being referable to central lesion.

WE have had frequent occasion of late to animadvert on the unsatisfactory state of the law relative to private lunatic asylums, and we have observed with satisfaction in the signs recently forthcoming that the forbearance of the public in this particular is reaching its limit. But whilst fully alive to the importance of not relaxing our efforts in this direction, we cannot shut our eyes to the fact that in a far different quarter—that, namely, of the public asylums—a state of things is arising serious enough to justify grave uneasiness, and even alarm. The tendency of late years has been for these institutions to be ever growing larger and expanding their borders, until they are assuming proportions altogether unwieldly; and we see cases in which from 1500 to 2000

insane individuals, *supposed to be patients*, are congregated under what is practically one roof, and under the care and control of one medical man.

Now if institutions of this magnitude are intended solely for the *care* of the insane, we have nothing to say against them; but, on the other hand, considered as *curative* establishments, their constitution is a delusion and a snare. To say that a certain number of recovered individuals are turned out annually from these institutions is beside the mark. Thanks to the *vis medicatrix naturæ*, cases will often recover when but a minimum of care and attention is bestowed on them. It does not admit of either question or dispute that from the large amount of administrative work necessarily devolving on the medical head of one of these huge establishments his medical functions are practically in abeyance. It is certainly little to the credit of the English lunacy system that the enormous mass of material that annually passes under the eyes of the medical staff of the asylums is almost wholly unutilised.

In saying this we give the explanation of the comparative stagnation of the special department of medicine under consideration, for whilst other branches of the art are advancing by leaps and bounds, psychological medicine, if not altogether stationary, manifests at best but a lame and halting progress. Let us not be misunderstood: we consider that the English county asylums are admirable institutions for the *care* of the insane, and in this regard reflect credit on their management; but as *curative* establishments they are by no means to be looked upon with equal favour. In truth, the great thing needed is the separation of the cure department from the care department of the insane; for whilst for the latter object large institutions are not harmful, and may be necessary, the establishment of small lunatic hospitals is in many ways imperative for the former. Such institutions officered by able and earnest medical men would doubtless before long yield abundant fruit. The only possible objection to this view—the economic one—has not, we think, any weight. Granted that these small curative establishments might be more expensive than the average county asylums, the extra expense incurred might be, and would be, fully compensated, and perhaps more than compensated, by the saving effected on the chronic cases in the asylums reserved for their care. Such a division of labour would, we entertain no doubt, have far-reaching beneficial effects, and be highly conducive to the welfare of the patients; and in the long run we make no question but that many an individual might be thereby rescued from being a burden on the rates for a period bounded only by the term of his natural life.

AMONGST the Acts of Parliament to which the Royal assent was given on the 14th inst. were the following:—The Cholera Hospitals (Ireland) Act; the Canal Boats Act; the Criminal Lunatics Act; the Disused Burial-grounds Act; the Cholera &c. Protection (Ireland) Act; the Public Health (Ireland) Amendment Act; the Public Health Officers Act; and the Brighton Improvement Act.

ON the 16th inst., a patient, while in a delirious condition, escaped from the temporary hospital for small-pox cases at Crewe. After five hours' search he was discovered hidden in some corn. He was naked at the time of his escape, and died on the 20th from the effects of disease and exposure.

Annotations.

"Ne quid nimis."

THE MEDICAL COUNCIL.

THE Medical Council is summoned to meet on the 6th of October, chiefly to elect a President, Sir Henry Acland's term of office having expired. It is possible, too, that by that time the English Colleges may have prepared a scheme, or may reproduce the old one, for a conjoint examination, and may ask the Council to sanction it. We shall revert to this subject before the meeting of the Council.

OPENING OF THE FIFTH INTERNATIONAL CONGRESS OF HYGIENE.

ON the 14th inst. the fifth international gathering of sanitary reformers was opened at the Binnenhof or First Chamber of the States General of Holland. Our correspondent will send us from the Hague some details of the proceedings, but we have already received the summary of the various reports which are presented as the basis of discussion. Thus, for instance, Dr. Corradi of Pavia will seek to demonstrate that we may admit the possible contagion of phthisis, but that transmission by clothes, rags, &c., is not yet proved. Cohabitation is the most likely, if not the only, means of contagion. Dr. Vallin of Paris has a report on the spread of tuberculosis by infected meat and milk, which he considers may occur unless the cause of infection is destroyed by exposure to great heat in cooking. Dr. Napias, as usual, appears as the champion of the working classes, claiming better legal protection for them against unwholesome industries and unhealthy dwellings. A great number of papers will be read by Dutch medical authorities on Over-pressure in Education, the Influence of Life Insurances on Infant Mortality, the Effect on Climate produced by the Destruction of Forests, and other topics. As yet no mention is made of Cholera, but it will be found almost impossible to exclude this "burning question" from the debates, and naturally the drainage of towns, notably Paris, will receive a large share of attention. The Congress will close its proceedings on Wednesday, the 27th inst. For Sunday next the Rhine Railway Company has placed a special train at the disposal of the members of the Congress, to take them to Rotterdam, Feyenoard, Dordrecht, and Moerdijk. There are entertainments for every evening, and the town of the Hague gives a reception to the members of the Congress at the Palace of the Arts and Sciences. Altogether, the Dutch will not fail to prove themselves worthy of their high reputation for hospitality.

REGISTRATION OF LODGINGS.

NEVER was this precaution more necessary than now. In consequence of the cholera scare and the clumsy and erroneous quarantine precautions taken by our neighbours generally, the watering-places and "health resorts" on this side of the "silver streak" are crowded, and it may be assumed that hygienic conditions are often seriously neglected. It would have been far wiser, in a precautionary sense, if the great bulk of English people had stayed at home this year, instead of exposing themselves and their families to the exceptional perils of towns and villages in which the one eager desire is to make hay while the sun shines, regardless of the most obvious dangers and careless of results, provided only that they can contrive to take the largest possible advantage of unusual if not unprecedented opportunity. Medical officers of health would do well to look into this matter at once, and, as some have had the courage and honesty to do, institute a system of special certificates, even

without the sanction of authority. Those who recommend sickly persons and families to hasten to these overcrowded places ought to share the responsibility of the advice they give with the local medical officers, by taking the trouble to ask the advice of these local men as to the particular hotel or house to which they send the persons who have consulted them.

ALCOHOLIC PARALYSIS.

THE current number of *Brain* contains an interesting account by Dr. Dreschfeld of Alcoholic Paralysis. He distinguishes two forms of the affection, the one being marked by ataxic symptoms, chiefly occurring in males, and subsiding on discontinuance of the alcohol. He thinks that the history of such cases of alcoholic ataxia, together with the absence of many of the ordinary symptoms of true dorsal tabes, suffice to determine their etiology. Moreover, tabetic symptoms—especially the absence of tendon reflex and the lancinating pains—are sometimes seen in the more typical cases of alcoholic paraplegia. This latter type is, he says, more frequent in females who have been addicted to alcoholic excess. The symptoms begin more or less acutely, and consist of sensory disorders, as hyperæsthesia of the lower limbs, sometimes with hyperalgesia, and often with lancinating pains and spinal tenderness. Anæsthesia or retarded sensibility and analgesia may follow. There is more or less motor paralysis, mostly of the lower but sometimes attacking the upper extremities, with diminished superficial reflexes and absence of tendon-reflex. Redness of the feet, hands, and other parts indicates vaso-motor disorder. Cerebral symptoms—as insomnia, restlessness, more or less delirium, and hebetude—may arise in the course of the disease, and are often the cause of death. As to prognosis, some cases which are early cared for recover; others recover for a time and then relapse; in others the course is steadily downward, death ensuing from cerebral symptoms, from exhaustion, or some intercurrent affection. Dr. Dreschfeld gives details of a well-marked case, which was readily diagnosed. It proved fatal, and at the post-mortem examination pulmonary and renal tuberculosis was found, but no lesions in the spinal cord. The peripheral nerves (the sciatics, musculo-spiral, and anterior crural were examined) showed degenerative changes, breaking up of the myeline, and in many places of the axis cylinder also. The condition is, then, one of peripheral multiple progressive neuritis, and can be distinguished mainly by its less acute course, and limitation of paralysis to the extensors, as well as by the more marked hyperæsthesia from the non-alcoholic progressive multiple neuritis described by Leyden, Strümpell, Pierson, and others. Its resemblance to lead paralysis was pointed out by Lancereaux, and Dr. Dreschfeld concludes by mentioning two cases of visceral neuralgia attributed to alcoholism which have some analogy to lead colic.

FEEDING OF INFANTS.

As a good working rule, it cannot be denied that infants under the age of seven months should take nothing but milk. Further, it must also be owned that some infants thrive though a departure be made in the direction of farinaceous additions to their diet; but the proportion of those who are able to bear deviations from the natural food must be very small. So that he who maintained that such farinaceous additions were innocuous would be under the necessity of proving his assertion. It appears to us that the matter lies in a small compass, and may best be explained by analogy. Some individuals can get through more work than others, their reserve force being greater. So it is with an infant's digestion. Human milk is that which nature has found to be best for infants generally; and if that cannot be obtained, other fluids artificially prepared must be substituted for it, closely resembling human milk. No starchy additions can be made without taxing the reserve forces of infantile digestion. Generally the tax cannot be met, and the insolvency of digestion is shown in the production of rickets. It must follow, therefore, that even those infants who do thrive when amylaceous articles are given, do so at an expense and loss which may not be evident, but which is nevertheless real. Dr. Keating has come to the following conclusions from some observations made on the salivary digestion of starch by infants:—The saliva of some infants possesses the property of converting starch into glucose. The age of the infant cannot be taken as an indication of this property of its saliva. When such a condition is found to exist, a small quantity of well-pre pared farinaceous food is valuable as an element in the diet. (This proposition we should be disposed to take exception to.) An examination of the stools of children so fed would be a guide as to the quantity of starchy food to be used, and when farinaceous food is employed, slow feeding is probably preferable to the use of the bottle.

SHOP EMANCIPATION.

THE conviction that shop labour no less than factory labour needs regulation is happily gaining ground. An able article by Lady Manners in the *National Review* takes up the principal points on which the present system of shop service errs. The practically unrestricted duration of daily work is usually regarded as comprehending the essence of the evil which it is sought to remedy. Roughly it does so, but associated faults are numerous, and from their nature cannot but aggravate greatly the bad effects of mere fatigue. The work of shop assistants may not, as a rule, be so severe in its muscular strain as that of factory *employées*, but it implies mental effort of quite equal and often greater tension and diversity. Again, the conditions under which work is done are usually anything but satisfactory. Under the best management ventilation is apt to be faulty in many such establishments. A space originally insufficient to contain the air-supply of twenty or thirty daily inhabitants, and ten times as many regular frequenters, cannot with any ordinary provision for renewal of its atmosphere be expected to feed the combustion of so many pairs of lungs, reinforced, it may be, by a brilliant array of gas jets burning in full flame. The heat of such rooms is in itself at once a test of their impurity and an independent cause of mischief. As regards meal-times, it is well known that the dinner "hour" is commonly a fable. In some houses the term "meal-time" has hardly any meaning during a busy season. Arrangements for other necessary calls of nature are sometimes so awkwardly designed that decent attention to these is not possible. The uncleanly overcrowding of young men or women in their dormitories is an old evil. So is the want of seats in shops, where these might well be allowed were master tradesmen willing to be as frank as they are facile towards their customers. It is not necessary to tell medical men that early disease and death are frequent under these conditions. Each of them has seen the vested capital of the shop attendant—health—again and again merged into the growing revenues of his employer. The remedy which is asked for this state of things is that a term equal to the average period of factory work, fifty-six hours per week, meals having been allowed for, should be assigned to shop labour. This is not too much to ask. In the case of women it is, we think, too little. Employers and customers, particularly poor customers, it is hoped, will endeavour to put an end to the metropolitan habit of shopping late, and the public is appealed to in support of the whole project of reform. We strongly recommend the public to listen to that appeal, and we hope that

all that social agreement can do may be accomplished by that means. At the same time, the question of shop labour in all its bearings appears to us much too large for settlement in this way. State legislation, which we deprecate wherever it can be done without, is here necessary. It has been successfully applied to the regulation of factories, and there is no reason why it should not be used with equal success to correct the very faulty righteousness of counter traffic.

THE PATENT MEDICINES STAMP ACT.

THE *Saturday Review*, in an able editorial on this subject, points out that there are few things more to be regretted in connexion with the Session just closed than the failure of the Government to put the Patent Medicines Stamp Act on a more satisfactory footing. "There is of course a small loss of revenue to be apprehended, but there are a hundred less harmful ways in which a similar sum might be raised. Mr. Childers stated in the House of Commons that the stamp at present brings in £160,000, and that he could hold out no hope of a repeal of the tax. This, if correctly reported, was curious language to use, the more so as he went on to say that he had applied to the Board of Inland Revenue for information on the subject, which he promised to study. The object of studying with care the operation of a tax which he holds out no hope of repealing is not very clear." We should concur in the justice of these strictures if we were satisfied that the utterances of the Chancellor of the Exchequer had been accurately reproduced. We have reason, however, to believe that Mr. Childers, if not incorrectly reported, was at all events reported less fully than he might have been. It appears that after he had replied to Mr. T. P. O'Connor, he was asked by Mr. Warton if the Government next session, or next session but one, intended to carry out the promise they made on March 26th, to bring in a bill dealing with patent medicines. Mr. Childers said he had taken no part in the discussion on the subject, but thought he might give the promise asked for. We are glad to find that the necessity for active interference is recognised by the Government, and we look forward with confidence to the repeal of the Act. The subject has been warmly discussed by all classes of society, and there is a general consensus of opinion that a question which concerns so vitally the health of the people cannot be dealt with too promptly.

ERYSIPELAS AFTER VACCINATION.

AMONG the accidents of surgery is erysipelas—an accident in many cases avoidable and avoided by surgical forethought, but one arising from so many different and often exceptional circumstances that it does not seem possible that the strongest concentration of human skill will ever banish it from the list of diseases. Nay, its very standing as a disease has reference rather to the degree than to the type of change which it indicates. Through the term erythema we can trace a generic development from the blush of emotion or the rosiness which borders a healthy wound to the tense and even suppurative hardness which we usually name and treat as erysipelas. This variation of type depends upon variety in causation, and the force and kind of the resulting change reflect the character of its stimulus. It will readily be admitted by all medical authorities that that two chief groups of such causes exist—that in which mechanical irritation is the prevailing feature, and that in which sceptic forces are at work. In aid of these there often comes the habit of body of the person attacked. The under-fed or improperly fed, the overworked, the relaxed and flabby types—in short, any in whom health means less than vigour—possess this constitutional proneness. There is abundant and daily evidence that dangerous degrees of erysipelas may proceed from almost any surface injury, as well as from deeper faults of vital action. The pin-scratch has no immunity which the amputated stump has not. In either case, dirt, friction, bad ventilation, and other equally common conditions may introduce this unwelcome complication. Much has been made of erysipelas after vaccination, and a feeling has been created by prejudiced and half-informed people against that measure on the ground of this occasional sequel, which is not its consequence. No candid mind can fail to see that there are numerous circumstances in the lot of children, especially of poor children, which help to determine inflammation at the seat of a pustule or of any irritable sore. The child may be unhealthy; the house may be unwholesome; the parents or the child may be uncleanly; the arm may have been rubbed by one of the shields so commonly in use, or clothed in some poisonous aniline-dyed sleeve such as the small draper can always find for a poor customer fond of colour. In these and many similar ways fault creeps in, but careful and thorough vaccination cannot, and does not, furnish a sufficient cause for fatal erysipelas. Much of the misconception on this point has arisen from a confusion of cause and effect, of *post hoc* with *propter hoc*, which unbiased reflection alone can remove. In this question, as in every other, judgment, not prejudice, must inform public opinion in order that neglect may receive its proper name and punishment, and vaccination may not be saddled with discredit which does not belong to it.

"KILLED BY LIGHTNING."

THE lamented death of the Earl of Lauderdale from the effects of lightning has served to emphasise the danger to life that lurks in one of the grandest and most entrancing manifestations of nature—a thunderstorm. In the majority of instances no amount of forethought or care can save the victim from the impetuous and capricious influence; and yet we think that not a few fatalities might be avoided if people only possessed the most rudimentary knowledge of electrical science, and the presence of mind to act upon such knowledge. But, in truth, there is much that seems mysterious in the lightning flash and its attendant phenomena. The brilliant presence and the wondrous sequel inspire the imagination more than the judgment. Poets and sages have clothed the zigzag writing in the air with attributes that are many of them only links in the chain of conditions of which itself is one, and have erred in assigning to the comparatively harmless thunder the dire effects of the momentary passage of the electric fluid. In one of his "Hebrew Melodies," Lord Byron has written: "As fall the oaks at once, and blasted by the *thunderstroke*." The subject of electro-dynamics is very abstruse, and yet it requires no great acuteness of intellect to enable one to grasp the main facts relating to the correlation and mutability of forces. It may not, however, be easy to demonstrate to the unscientific mind how an electric current displaces the atmosphere and causes those marvellous successions and intervals of sound which in the aggregate are known as thunder; how it is rendered visible as a flash of light, or is transmuted into electrolytic action, decomposing the most stable chemical compounds; or, lastly, how it is converted into an outburst of mechanical violence of uncontrollable and almost immeasurable power. The familiar exhibitions of the workings of Nature's laboratories may be utilised for instruction and guidance. Had George Henry Mitchell, killed by lightning on Saturday week last whilst seeking shelter under a tree, been aware of the danger he was incurring by placing his body in close proximity to an imperfect conductor, he would have preferred a good drenching in the open meadow to the treacherous protection

he sought from the storm. In this man's case the face was blackened, the hair on the face and head singed, and the left tympanum ruptured; his hat was torn, the laces of his boots charred, and in the instep of each boot a large rent was made. Results very similar to those last mentioned may be seen in the museum of St. Mary's Hospital, but in that instance the patient recovered. In Lord Lauderdale's case, a deep wound was inflicted on the forehead, scorched lines indicated the path taken by the electric current, whilst his lordship's watch and chain were fused. It is a well-known fact that the course of the superficial vessels and nerves is occasionally mapped out with tolerable accuracy. The blackening is partly due to simple burning, partly to reduction of the oxyhæmoglobin of the blood. It was formerly supposed that the blood of animals killed by lightning remained quite fluid, but such is not the fact; the coagulation, nevertheless, is imperfect.

ALLEGED CURE FOR HYDROPHOBIA.

As far back as 1865, Dr. Buisson, a respected correspondent reminds us, wrote in the *Salut Publique* of Lyons an article claiming to have discovered a remedy for hydrophobia. The Doctor is said to have himself been inoculated with the virus of rabies by means of the saliva from a patient suffering from the disease; the saliva impregnating a handkerchief having come in contact with a slight abrasion on his left index finger. Nine days after the accidental inoculation Dr. Buisson began to suffer from symptoms referable to hydrophobia. When this stage had been reached, vapour baths at a temperature of 52° C. were had recourse to, not with the intention of cure, but it is said with a desire to produce suffocation. According to the account given, strange to say, the whole of the symptoms disappeared and never recurred. Dr. Buisson declared that after his recovery he attended eighty individuals who had been bitten by mad dogs, and never lost a single case. When an individual has been bitten by a mad dog, he must for several successive days take a vapour bath. This procedure is spoken of as the preventive remedy. When the disease has declared itself, one vapour bath alone is required, the temperature being rapidly raised to 37° C., and then more slowly to 63°. The patient must be strictly confined to his chamber until the cure is complete.

THE "SLUMS" OF NEW YORK.

ON a recent occasion we alluded to the new law affecting the drainage and salubrity of the tenements occupied by the New York poor. Unfortunately these regulations, though excellent and productive of beneficial results so far as new buildings and respectable lodgers are concerned, cannot prevent the fearful overcrowding, squalor, poverty, and dirt that have for long existed, especially on the Manhattan Island. A lengthy report, accompanied with a sensational illustration, was recently published by the *New York Herald*, describing the condition of the New York poor as equal to what may be seen in the worst quarters of London. In Manhattan Island the number of poor tenements has increased from 14,494 in 1869 to 21,163 in 1881. The immense size of the houses renders their ventilation extremely difficult, and the *Herald* report describes "the intensity of the pollution of air in these buildings as inconceivable." Nothing can surpass the "impurities found in such a place as Gotham-court, which for thirty years was filled with cases of contagious disease, and where a census taken by Dr. Elisha Harris in 1859 showed 250 sick out of a population of 500, including typhus fever on every floor, and numerous cases of typhoid fever, measles, scarlet fever, small-pox, and diphtheria." The new and model tenements are also reported to be almost as offensive as the worst rookeries, in consequence of the neglect on the part of the tenants and lack of supervision by the landlords. In New York, as in London, the Italian, Irish, and Poles are the most difficult to train to ideas of order and cleanliness. Altogether, the main facts and difficulties seem to be much the same on both sides of the Atlantic. The Americans, however, have a good law, and we trust they will succeed in securing its rigorous application.

RELAPSING FEVER.

DR. VANDYKE CARTER has published a *brochure* comprising observations on relapsing, or, as he terms it, "spirillum fever," made in Bombay subsequent to the appearance of his work on the subject in 1882. He describes examples of sporadic cases, and of others occurring in the form of restricted epidemics, all the cases presenting the usual features of the disease; and his former conviction was also confirmed as to the symptomatology being more diverse than is often supposed. The mortality, so far as could be ascertained with certainty, of these cases was 6·6 per cent. Nothing new was learnt as to treatment, the high pyrexia being quite uncontrolled by sodium salicylate and resorcin. He lays stress upon the importance of arriving at an early diagnosis, and the great value of the detection of the spirillum in the blood, a test which he recommends should be adopted in all "outbreaks of epidemic or endemic fever of doubtful character occurring in the districts and jails of this country." He believes this to be the pathognomonic sign, and its presence to be sufficient to establish diagnosis in a doubtful case, whether the relapsing character of the fever be present or not. Failures to detect the spirillum, on the other hand, do not positively negative a diagnosis, since the microscopic investigation requires naturally special care and attention. The importance of some definite means of distinction from other types of fever which prevail in India is self-evident, and Dr. Carter does well to insist on the application of all means to this end. Dr. Carter adds some interesting data concerning the gradual decline of the epidemic which began in Bombay in 1877, and mentions that the persistence of the disease cannot be attributed to a continuance of distress and famine. It would seem rather that it had become naturalised or endemic, and evidence of contagion was strong in many cases. Speaking of the general course of epidemics, he compares their character to that of a conflagration, "which begins, extends, and becomes extinct proportionately to the amount, state, and location of inflammable material encountered during its existence"—a far apter comparison, he thinks, than the ordinary conception of a "wave" or atmospheric current.

"BURYING CHOLERA PATIENTS ALIVE."

IT is not so much undue haste as inexcusable carelessness that must be blamed for the premature burying of persons who are not really dead. Such heedlessness as alone can lead to the commission of this crime is not a shade less black than manslaughter. We speak strongly because this is a matter in regard to which measures ought to be at once taken to render the horrible act impossible and to dismiss all fear from the public mind. If it be a fact, as would seem to be indisputable, that during the last few weeks there have been cases—we will not attempt to say how many or how few—of burying alive, a scandal and a horror, wholly unpardonable in the last quarter of the nineteenth century, have to be faced, and the sooner the full truth is known and rules of safety established the better. Let it be once for all decided that measures shall be taken to ascertain the fact of death before burial. Why not revert to the old practice, and *always* open a vein in the arm after death, or pass a current of elec-

tricity through the body before the coffin is finally screwed down? It may be held that these unpleasant resorts are unnecessary. We do not think they are. In any case enough is known of the *possibilities* of "suspended animation" to render it unsafe to bury until the evidences of an actual extinction of life are unmistakable; and, as it is impossible to wait until decomposition sets in in all cases of death from infectious disease, it would be prudent to adopt what must certainly be the least of evils.

DISINFECTION AND DEODORISATION.

WE have received certain papers from Messrs. Fearenside and Baynes as to a patent automatic disinfecting and deodorising apparatus, which can be used in connexion with waterclosets, urinals, water-carts, &c., and which is so designed that any given quantity of a disinfecting fluid can be mingled with the water and be automatically delivered whenever either of the appliances referred to comes into use. Mechanically the arrangement is ingenious, and wherever the regular mingling of a fluid disinfectant with any water becomes necessary it will be useful. But our doubt as to the value of this and allied appliances is twofold. If a water-closet, for example, be foul, its filth will certainly not be "disinfected" by means of such an arrangement. Disinfection must be regarded as meaning the destruction of matter capable of conveying infection, and in the present state of our knowledge as to what constitutes the poison of the infectious fevers we cannot speak of disinfection apart from the destruction of all the organic matter in which the infection may lie hidden, and it is certain that no occasional flushing with water containing a certain quantity of any of the ordinary so-called "disinfectants" attains this end. Then, again, if a watercloset does really stand in need of such occasional chemical flushings, it may be taken for granted that the apparatus is in fault, being one permitting the retention of contents or being otherwise favourable to foulness. The remedy is to get rid of the faulty contrivance, not to attempt to deal with it by disinfecting fluids. In so far as the apparatus facilitates deodorisation it may have important uses, especially in connexion with urinals and street watering, but even then we should prefer to see the removal of the conditions which lead to offensiveness, rather than the attempt, however successful, to deal with them by an ingenious method of deodorisation.

SAFETY FEVER AMBULANCE.

HAVING been for some time past impressed with the idea that ambulances as at present constructed must be a source of danger to the public, Dr. Gayton, medical superintendent of the North-Western District Hospital, Haverstock-hill, has recently had a carriage so altered as to do away with, or at least modify, such danger. To those acquainted with the ambulance carriage at present in use, it must be apparent that the open windows and louvre-shutters readily permit a free egress to infectious matter from patients; and should a susceptible person be near such a source of infection—when, for instance, the carriage stops at the gates of a hospital till admitted,—such a person runs a decided risk of "catching the fever." In his ambulance, Dr. Gayton has replaced the louvre-shutters and a portion of each window by a double layer of perforated metal, between which wool, lint, or other suitable material, impregnated with some recognised antiseptic, can be placed. One of the layers of metal is so arranged as to permit of the old wool or lint being readily renewed. With this arrangement it becomes necessary to have some special means for ventilation, and in the new ambulance use is made of Tobin's shaft, modified as follows: The shaft is horn- or trumpet-shaped, with the small end placed vertically within the ambulance; in this end is fitted a plug consisting of a double layer of the perforated metal, with antiseptic material interposed. The larger end of the shaft opens externally just below the driver's seat, with the opening so placed that, when the ambulance is in motion, the air blows directly into it. Two shafts are provided for each ambulance, placed one on either side of the driver's legs.

THE BRADSHAWE LECTURE.

NOTWITHSTANDING the unfavourable effect of the temperature and other peculiarities of August in London, and we may even admit of some peculiarities in Dr. Philipson's elocution, it must be acknowledged that Sir W. Jenner could not have made a fitter selection for the Bradshawe Lecture than Dr. Philipson, and that the lecturer could not well have chosen a subject more congenial to the character of Bradshawe or to the designs of his widow in founding the lecture, than the Pathological Relations of the Absorbent System. This great system of vessels and glands, with all their hidden and quiet operations, are apt to be forgotten but for such expositions as Dr. Philipson's, and those of Dr. Curnow in his capacity of Gulstonian lecturer in 1879. Practioners who consider that there are probably a thousand lymphatic glands in the body, that the lymphatic vessels are the main agents in the transmission of the gravest forms of disease, and that the fluid discharged from the thoracic duct of man in twenty-four hours is estimated at six or seven pounds, can scarcely fail to realise more fully the importance of this system and its pathological conditions, which will be found well described in this Bradshawe Lecture.

SANITARY CONDITION OF CALCUTTA.

THE memorial to the Lieutenant-Governor of Bengal from the European residents in Calcutta has already led to important action bearing on the sanitary condition of the city. In a letter addressed to the chairman of the municipal corporation, the secretary to the Government informs him that the Lieutenant-Governor, after a careful inquiry into the statements of the memorialists and a review of the action which has been taken by the commissioners in connexion with the required sanitary improvements, is of opinion that it is fully established "that the past and present action of the commissioners for the sanitation of Calcutta is inadequate." And he is of opinion that it is no less clear that the outbreak of disease in March and April might have been mitigated had proper measures been adopted to improve the condition of the unhealthy portions of the city. "While the mortality from cholera was less than 5 per mille per annum in the Park-street Section, it was 46 per mille in Jorabagan, 36 per mille in Burrabazaar, 31 per mille in Coomertolly, and 25 per mille in Jorosanko and Colootollah." After pointing out how the commissioners had neglected to adopt the advice given them by their officers on the subject of the removal of undoubted sources of disease, he adds, "Nothing can be more certain than that, had the commissioners taken more vigorous and determined action to carry out the Lieutenant-Governor's recommendations upon this point, the virulence of the late outbreak would have been greatly mitigated." Recognising, however, that one of the great difficulties in the way of sanitary reform has been the want of a clear understanding of what has been required, the Lieutenant-Governor has decided to appoint a committee, consisting of the chairman and two members of the corporation, two medical officers, an engineer officer, and a non-official European gentleman to be nominated by the Government, whose duty shall be "to draw up (1), for each section of the town, a complete scheme for the reclamation of bustees, the filling up of tanks, the provision of water-supply, surface

drainage, and the like; and (2), for the whole town, such a scheme of structural improvements, in the way of opening up new streets and straightening or enlarging existing streets, as may come within the limits of the probable financial resources of the corporation." It is to be hoped the corporation will join cordially in this work, but if not it seems pretty certain that the Lieutenant-Governor will take steps to carry out the requisite sanitary measures independently of them. The composition of the committee appears to be very satisfactory; it is not too large to work well and quickly, and its recommendations are likely to be such as may be insisted upon by the Government and carried out efficiently with the support of the leading members of the European population. The action of the Lieutenant-Governor must commend itself to all who take an interest in the physical well-being of the citizens of Calcutta.

TABES DORSALIS.

THE subject of locomotor ataxy is one which has perhaps engaged more attention from clinical observers than almost any other affection of the nervous system. The remarkable variations in and concomitant appearance of symptoms that occur in tabes seem to afford endless scope for inquiry. One of the most recent contributions to the subject is that of Dr. O. Berger, in a paper read before a Schleswig scientific society. Basing his conclusions upon the clinical features of the disease, and thereby following in the wake of Charcot, Leyden, Buzzard, and so many others, he affirms that tabes dorsalis may issue fatally without having presented any ataxic symptoms in its course; and he thinks it probable that such exceptional cases depend on the limitation of the anatomical lesion to particular tracts of the posterior columns. In the majority of cases the existence of lightning pains forms a valuable aid in diagnosis, which is further strengthened by the presence of Westphal's symptoms and the Argyle-Robertson pupil. In many cases the early occurrence of gastric crises, ocular paralysis, uncertainty of gait, &c., confirms the diagnosis. The initial neuralgia may present the character of a severe migraine. Lastly, he believes that much significance is to be placed on vesical derangement without obvious local disease.

TROPICAL HEAT IN ENGLAND.

WE have been experiencing exceptionally high temperatures both in the sun and in the shade. It is not surprising that sudden deaths have occurred, or that strong men have been overpowered. In this country, with its proverbially variable climate, the native organism is so developed as to possess a considerable faculty of adaptation to the changes we are accustomed to encounter—that is to say, to which we are habituated as individuals and as a race. The typical English "body" is furnished with a heat-producing and regulating apparatus, which is far better able to meet the demands made upon it by extremes of atmospheric temperature than is the similar apparatus of an average Indian or a Laplander. This is abundantly proved by the fact that the able-bodied Briton can live in the tropics or in the immediate vicinity of the North Pole if he be not wantonly deprived of his lime-juice. It must, however, be remembered that the majority of the population are not able-bodied; and it must needs happen that, when, relatively, excessive heat visits us, a large proportion of the population are severely tried. The tolerance of inordinate heat requires a faculty, first, of quickly "damping down" the fires within, and, second, of as quickly opening up the evaporators, radiators, and disseminators. In plain words, we must diminish the oxidising process, and at the same time—which is difficult—so determine the blood to the surface and establish a discharge of heat by evaporation as to preserve the mean of health (about 98·6-8°) in spite of the sudden rise of external temperature. The diverse experiences of any dozen persons taking a Turkish bath for the first time in their lives, or much out of their habit, would suffice to show how difficult it is to avoid internal congestions, even under conditions the most radiative, in a highly heated atmosphere. We as a nation can bear sudden heat better than almost any other people, but it taxes us heavily, and many individuals must succumb. Possibly by the time this reaches the reader it may be "winter" with us again; but if the heat *should* persist or return, care should be taken to minimise the strain cast on the multitude by such obvious changes of rule in public and private workshops as shall give the weary labourer—especially if he be exposed out of doors—a period of rest during the heat of the day, such as he would enjoy if he were in form, as well as in fact, a dweller in the tropics.

ISOLATION ARRANGEMENTS AT CANTERBURY.

THE Canterbury corporation have once more, by a majority of one, decided not to provide themselves with means for isolating infectious diseases. The scheme had at last come down to the purchase of a hospital tent; but even this tentative measure has been set aside. If the decision arrived at meant that the corporation intended to commence the erection of some permanent building, however small, it would be one to be commended, for tents are not adapted to the colder months of our climate, and in point of site, sanitary arrangements, means of cooking and administration, they need much the same requirements as a brick pavilion. But we fear Canterbury is waiting for its horse to be stolen before it goes to the expense of purchasing a key. The individual members of the corporation probably act very differently as regards their own private interests, and take care to insure their premises against fire, annually paying the necessary premiums without so much as a grumble, rather than wait for a fire. The principle involved is the same, and many an authority, under the influence of a prevailing epidemic against which it has not provided itself, has had to pay far more than the accumulated annual rates which would have been necessary to provide a hospital. The action of individuals and that of collective bodies, however, often differ materially.

NORTH-WEST LONDON HOSPITAL.

IT will be remembered that after the resignation of the entire medical and surgical staff of the North-West London Hospital, the committee appointed delegates to confer with three representative members of the profession, for the purpose of framing new rules for the conduct of the hospital. We learn that rules have been agreed upon which we trust will be found to satisfy the just requirements of the profession and the public. The rule enabling three members of a committee to form a quorum, to which strong objection was taken, has been so altered that a quorum can only be formed when there are at least three members present in addition to the lady founders of the hospital.

SHIP SURGEONS.

ATTENTION is again drawn to the question of surgeons on the Transatlantic passenger steamers. The immediate occasion is the alleged death of a lady from heart disease after several days of severe sea-sickness, during the whole time of which, it is stated, neither the ship surgeon nor the stewardess visited her. The publication of this case, which is to come before the courts of law, has elicited many complaints as to the qualifications and services of ship surgeons, and correspondents have taken the trouble to publish the ages of the surgeons in the Transatlantic lines. We can make no comment whatever on the case mentioned above

until the actual facts have been elicited by the lawyers; but we must support a body of men who discharge difficult duties for the most part well, and often under great drawbacks. The appointments are such that it is impossible to expect middle-aged and experienced practitioners to hold them; but the companies can readily command the services of surgeons for longer periods by offering more liberal remuneration, and especially by giving them proper authority over all the sanitary conditions in the ship. It must not be forgotten, too, that the subjects of sea-sickness, for which, after all, medical skill can do so little, are very likely to cast upon surgeons blame which should rest upon themselves, the arrangements of the ship, or upon the sea itself.

THE HOSPITAL SATURDAY FUND.

AN admirable circular has been addressed by Mr. Morley the president, and Mr. H. N. Hamilton Hoare, the treasurer, of the above fund, to employers of labour, foremen, and others, setting forth the ease with which, by a small effort, the working men of London might add enormously to the resources of the London hospitals and dispensaries. We quote one paragraph, which is very reasonable, and is much in the line of our constant pleadings on this subject:—"There are in London at least 1,000,000 of working people who could afford a halfpenny per week each towards the support of hospitals and dispensaries. In this way a sum of more than one hundred thousand pounds annually might be contributed to these institutions by those who derive the greatest benefit from their existence." Let us hope that the effect of this appeal will be to elicit the sympathy of the working classes, and thus relieve the great responsibilities of those who administer hospitals and dispensaries.

THE WESTMINSTER UNION.

AT the meeting of the Board of Guardians of the Westminster Union, held at the board-room on the 15th inst., a copy of a letter which had been sent to Mr. J. D. Bliss, the master of the Poland-street workhouse, by the Local Government Board, was read. In this letter the Central Board, after reviewing all the facts connected with the official inquiry, the election of a new board, their suspension of Mr. Bliss, &c., conclude as follows:—"The Board cannot hold that the facts which were elicited at the inquiry, apart from any circumstances which have occurred since, do not justify the conclusion at which the guardians have arrived; and as the Board under the circumstances are not prepared to remove your suspension, they must request that you will at once place your resignation in the hands of the guardians." In accordance with this decision Mr. J. D. Bliss tendered the resignation of his office.

SANITARY INSPECTION OF PORTS.

DR. DE CHAUMONT, F.R.S., is engaged on behalf of the Local Government Board in inspecting the sanitary arrangements of many of our ports, in connexion with the state of preparedness to cope with cholera, should it be imported. At Faversham he found that in the absence of any infectious hospital a large barge would be held in readiness for the purposes of isolation. His inquiries both there and elsewhere included all relating to the inspection and disinfection of ships, the burial of bodies, and the landing of patients. He is reported as being favourable to cremation, could this system for the disposal of the dead be carried out in this country.

DRS. H. J. BIGELOW and R. M. HODGES have withdrawn their resignations from the staff of the Massachusetts General Hospital.

THE *Warsaw Courier* is reported to have published a letter from a subscriber, in which the writer offers himself as a subject to be experimented upon in reference to cholera. "I am unmarried," says he; "I have no ties of any kind, and no plans for the future. I therefore wish to be of use to humanity by undergoing any experiments which have not yet been tried upon human beings. I seek no reward, but should require to be paid my travelling expenses to wherever I might have to go to be experimented upon, and those of my return journey to Warsaw, should I be spared to perform it. I may add that I am twenty-four years of age, and in good health." The writer says that communications in answer to this may be sent to "Z. A. K., care of K. Tsibulski, china and glass dealer, Theatre-place, Warsaw."

AT a recent meeting of the Hampstead vestry, a deputation, representing a recently held public meeting of ratepayers, presented a memorial to the vestry, asking that body to move for an injunction to restrain the Metropolitan Asylums Board from continuing to use their North-Western or Hampstead Hospital for the reception of small-pox cases. The memorial was referred to the Sanitary Committee for consideration and report, and the vestry clerk was instructed to forward a copy of the same to the Metropolitan Asylums Board.

IN their report on the composition and quality of daily samples of the water supplied to London for the month ending July 31st, Messrs. Crookes, Odling, and Tidy state that, altogether, the quality of the water, as indicated by its state of aeration, and by its freedom from turbidity and excess of colour and organic matter, continued excellent.

THE members of the Queen's Colleges (Ireland) Commission have now closed their inquiry so far as regards the taking of evidence, and will examine no further witnesses.

DR. GEO. H. B. MACLEOD, Regius Professor of Surgery, University of Glasgow, has been elected Foreign Correspondent to the Academy of Medicine at Paris.

MR. J. HARRISON, M.R.C.S., has been elected Coroner for East Essex.

THE BIOLOGICAL LABORATORY AT THE HEALTH EXHIBITION.

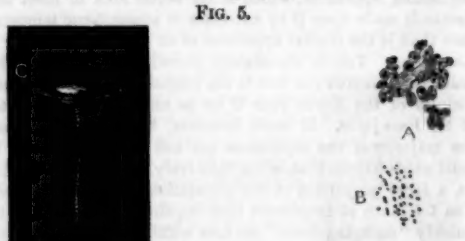
No. II.

BACTERIA ASSOCIATED WITH DISEASE IN MAN.

MICROCOCCUS OF PNEUMONIA.

THIS organism is found abundantly in the fluid expressed from the lung in cases of acute lobar pneumonia. It is a round or oval micrococcus (Fig. 5, A), which is surrounded

FIG. 5.



A, Fluid from the lung. B, Cultivation in gelatinised meat infusion. Objective $\frac{1}{12}$ in. The micrococci have lost their hyaline envelope. C, Test-tube cultivation.

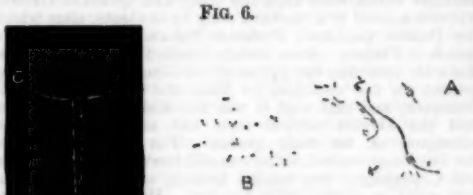
by a hyaline envelope. It may be cultivated in gelatinised meat infusion, but the envelope disappears from the micro-

coccus under these conditions, (Fig. 5, B) In test-tube cultivations (Fig. 5, C) it forms a characteristic figure, the so-called "nail cultivation." This consists of a large cushion-like expansion, at the point of which the needle enters the cultivating medium, and a rather slender growth along the needle track. The growth is of an opaque white colour. When a few minims of the cultivation are mixed with boiled distilled water and injected into the lungs or pleural cavity of a mouse, the characteristic appearances of acute lobar pneumonia are produced. After such an inoculation the organism is found to have regained the hyaline investment. If the cultivation is mixed with boiled distilled water, and a spray of this liquid is directed into a cage containing mice, a certain proportion of them are affected with acute lobar pneumonia. Injection and inhalation experiments with rabbits are not attended with any such results.

BACILLUS OF TYPHOID FEVER.

This bacillus is constantly present in sections of the ulcerated portions of the wall of the intestine of patients dying in the acute stage of the disease. It is also present in the mesenteric glands, and frequently in the liver, spleen, and kidneys, forming plugs in the small capillaries. It is short (Fig. 6, B), measuring about one-third the diameter of a human red blood-corpuscle. The breadth is one-third the length. When cultivated in gelatinised meat infusions, the appearance of the bacillus is somewhat altered. (Fig. 6, A.) It is larger, and tends to grow out into long filaments, in which

FIG. 6.



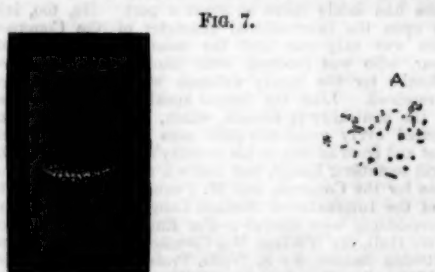
A, Cultivation in gelatinised meat infusion at the ordinary temperature. B, Cultivation in solidified blood-serum at the body temperature. Objective $\frac{1}{12}$ in. C, Test-tube cultivation.

by careful staining the individual bacilli may be distinguished. When cultivated in solidified blood serum at the temperature of the body (Fig. 6, B), the shorter form, similar to that observed in sections of the intestinal wall, is reproduced. The constant presence of this organism in the intestinal ulcers has led to the view that typhoid fever is the result of its agency. This has not hitherto been confirmed by the experiment of reproducing the disease by inoculation in other animals, as no other animal has been found which is subject to this disease. In this respect cultivations of the bacillus correspond with typhoid material direct from the body, as this, too, is inert when introduced into other animals.

MICROCOCCUS OF ACUTE OSTEOMYELITIS.

This organism is constantly found in the pus of the abscesses in connexion with the bone, when they are opened. It is a small round micrococcus, which frequently occurs in pairs (Fig. 7, A). It may be cultivated in the usual manner, and causes the gelatine in which it grows to become liquid.

FIG. 7.



A, Micrococci from cultivation in gelatine. Objective $\frac{1}{12}$ in. C, Test-tube cultivation.

(Fig. 7, C.) The micrococci sink to the bottom of the liquid as a moderately compact orange-yellow precipitate. They also grow readily on potatoes,[1] forming orange-yellow colonies. When inoculated or introduced subcutaneously into a healthy rabbit, no pathogenic effect is produced. If, however, the bones have previously been injured, the injection of a quantity of the cultivation into the veins is followed by appearances resembling very closely those of acute osteomyelitis in man.

THE BACILLUS OF TUBERCLE.

This bacillus is found in all tubercular affections (acute tuberculosis, phthisis, scrofulous diseases of joints, bones, glands, &c.), as well as in the sputa of phthisical patients, and in tuberculosis of the lower animals. It is a slender rod-shaped organism, measuring 2 to 4, rarely 8, μ in length. It often occurs in groups, and is frequently curved. In some cases it bears spores. In sections of tubercles the bacilli are found chiefly in the spreading region among the epithelioid and giant cells. They disappear as the part becomes cheesy. It may be cultivated at the body temperature on the surface by blood serum which has been sterilised and coagulated by heat. It forms irregular dry white scales and patches, which grow slowly. (Fig. 8, C.) Small portions of such

FIG. 8.

A, Bacilli from a tubercle. B, Portion of sputum of phthisical patient. Objective $\frac{1}{12}$ in. C, Cultivation in solidified blood-serum.

cultivations introduced into the subcutaneous tissues, the cavities of the body, or the blood of rabbits and guinea-pigs, cause the death of the animal from acute tuberculosis. This result may also be obtained by causing the animal to inhale a spray of phthisical material or cultivations, or by causing it to swallow the bacilli with its food.

THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

NEVER has more splendid hospitality been offered to any body of men than that tendered by the city of Copenhagen and the whole Danish nation to the International Medical Congress, which concluded its labours on Saturday last. Never has the medical profession received a more heartfelt and noble recognition of the services which it renders, and tries to render, to humanity at large. Those who visited the Congress were one and all made to feel the warmth of their reception from the moment of landing on Danish soil. The formalities of the Custom-house at Korsor were dispensed with, and members of the Congress were at once bowed to their carriages, and on the arrival of the train at Copenhagen the members of the Reception Committee were at hand to give every assistance possible to the strangers. It has been stated that at the London Congress the choice of Copenhagen was made because it was felt that a city so inferior in size would certainly not attempt to outdo the hospitality of London. We cannot for a moment think that any vulgar notions of rivalry have actuated the Danes, but

[1] A potato cultivation is prepared as follows:—An old potato is taken and well scrubbed with a nail brush, care being taken not to injure the epidermis. It is then soaked for half an hour in corrosive sublimate solution (1–1000). It is then steamed for half an hour. While still hot it is cut in two with a hot knife, and the halves laid cut in a dish protected from dust. When the potato is cool it may be inoculated with an organism, by means of the platinum needle, in the usual way.

we must in all fairness admit that no city in the world could have shown more lavish hospitality and more courteous consideration for its guests than has the fair city of Copenhagen. We English are apt to think that domestic hospitality is the peculiar characteristic of our race, but we now know that this peculiar characteristic must assuredly have been inherited from our Danish ancestors. In Copenhagen, during the week of the Congress, the flow of private hospitality was continuous and splendid. Large dinner parties were given night after night to the more distinguished guests, and houses, servants, carriages, and horses were unreservedly placed at the disposal of the chiefs of medical science.

Of public hospitality there was an equal abundance. The municipality provided luncheon every day for the members, and in addition to this there were three splendid entertainments. On Wednesday there was an excursion to Elsinore, some 1500 persons travelling to that pleasant town by water, where, on their arrival, a luncheon was served in the Castle of Kronborg, which, strangely enough, has been taken by Shakespeare for the scene of the greatest of his plays. The building is romantic enough to give point to any passage even in such a play as *Hamlet*, but why the poet selected this particular castle as the scene of his metaphysical tragedy will ever remain a puzzle for human ingenuity to solve. From Elsinore the party returned to Copenhagen by special trains, many of the guests stopping to see the Castle of Fredericksborg, which was originally built by Inigo Jones for Christian IV. Inigo Jones's building was gutted by fire in 1859, but has since been restored with dazzling splendour by the munificence of a private citizen. On Thursday the municipality gave a splendid dinner to 1200 guests in a wooden building specially erected on the quay at Copenhagen. This dinner was most successful. Notwithstanding the number, it was well served, and the glee-singing by the students and the musical performances by the band will not readily be forgotten by those who were present. The room was necessarily too large for effective speaking, but those who were within earshot could not but enjoy the simple and effective oratory of the Governor of Copenhagen, of M. de Bille, of Pasteur, Virchow, and Paget. After dinner the whole company embarked on four steamboats, and made a triumphal progress to the Tivoli Gardens. The whole of the shipping was gaily festooned; the boat-clubs rowed past the steamers and tossed their oars in honour of the guests; coloured lights were displayed, bands played, and the quays were packed with a dense crowd of spectators, cheering and waving hats and handkerchiefs. At the Tivoli Gardens were some 25,000 persons in addition to the members of Congress, and here ample amusement was afforded in the shape of music, illuminations, fireworks, and a variety of theatrical and other performances. The night was mild and lovely, and it was past midnight before the company finally separated. On Friday, the last day of the Congress, the most splendid of all the entertainments was given by the King at the Christiansborg Palace. The guests assembled at 8.30, and soon the vast and noble rooms were crowded almost to excess. At 9.30 the Royal party arrived, including the King and Queen, the King and Queen of Greece, the Crown Prince and Crown Princess, Prince Waldemar, Princes William and John of Glucksbourg (brothers of the King), and the ladies and gentlemen of the Court. The leading members of the Congress were presented to their Majesties by the ambassadors from their respective countries; and among those who received this honour through the mediation of the Hon. Mr. Vivian, the British ambassador, were Sir James Paget, Sir W. Gull, Sir S. Wells, Sir Risdon Bennett, Sir W. Mac Cormac, Sir H. Acland, Professors Priestley, Ogston, Marshall, Macewen, Chiene, Stokes, Watson, Poore, Knowsley Thornton,, and others. This ceremony concluded, their Majesties walked through the crowded rooms to the supper-room, a noble hall, where a truly regal repast was provided, during which the King's musicians discoursed most excellent music. The supper ended, the King proposed, in a few kindly, dignified words, the health of his guests, and expressed the honour which he and his subjects had felt in receiving the Congress. Sir William Gull, at the request of Professor Panum, the President, thanked their Majesties on behalf of the Congress, and said that never had the profession of medicine been more honoured or so royally entertained. Sir Wm. Gull's speech was short, courteous, and judicious, and was received with every mark of satisfaction by his medical colleagues. No Englishman who was present at this Royal *fête*, and who experienced the kindly courtesy of the King and Queen of Denmark and the Danish Royal Family, could fail to see whence was derived the beauty, dignity, and kindliness which have given to the Princess of Wales her undying popularity, and have made her at once respected and beloved by the whole English people. The British members of the Congress cannot but feel grateful to the Hon. Mr. Vivian for the hospitality and courtesy which were shown by his Excellency to all subjects of the British Crown who visited the brilliant Congress of Copenhagen.

(From our own Correspondent.)

The eighth International Medical Congress was opened on Sunday, August 10th, in Copenhagen, by a festival which was attended by more than 1500 people. Until a few days before the opening of the Congress only about 500 foreign medical men had registered their names, but on Friday, Saturday, and Sunday an equal number arrived. As all the hotels had been taken long ago by those who had applied to the Reception Committee for rooms, all the new comers were either received as guests in Danish families or went to private boarding-houses. On Monday night, the number of members of the Congress present amounted to more than 1700, of which about 500 were Danish. The festival, which was honoured by the presence of the King of Denmark, who is the patron of the Congress, and by the Royal Family, amongst whom were seen the King and Queen of Greece, was commenced by a cantata, sung by students, after which the Danish president, Professor Panum, rose and made a speech in French. After having thanked the King of Denmark for becoming the patron of the Congress and for being present on the occasion, he bade the guests welcome to Denmark, and said that it was not without some anxiety that the Danish medical men had asked their foreign colleagues to be their guests. The great success of the last Congress in London was still fresh in their memories, and Copenhagen was limited both in area and accommodation, as compared with London. However, as Copenhagen had had the great honour of being selected as the meeting-place for the eighth International Medical Congress, the Danish medical men had done their utmost to show how welcome their foreign guests were; while, on the other hand, they reckoned very much upon their guests' forbearance. Professor Panum then thanked the Committee for the last Congress in London, for those never-to-be-forgotten days, and he was happy to be able to personally thank Sir James Paget and Sir Wm. Mac Cormac, who were then present. He then said that national prejudices ought to have no place at an International Congress such as this; the different languages, instead of being as flags to point out the speaker's nationality, should be as sails which enabled men of different nations to approach each other. The famous Tower of Babel differed from modern science, because the latter came from heaven and demanded sacrifice and humility on the part of those who worked in its service; while vanity, selfishness, and jealousy between nations would only produce a weak building, which would soon go to pieces. Sir James Paget then rose, amid loud cheers, and spoke in honour of the Danish Royal Family, to which England especially was much indebted, because it had given England the Princess of Wales, who was a model to her sex as wife, mother, and Princess. Sir James Paget's speech, the language of which was elegant and the style perfect, was received with loud applause. Virchow then spoke about the development of medical science, in which Scandinavians had lately taken so great a part. He, too, laid stress upon the international character of the Congress. Science was only one and the same everywhere. M. Pasteur, who was received with loud cheers, expressed his thanks for the hearty welcome which the foreigners had received. Like the former speakers, he laid stress upon the neutrality of science, which, however, in no way prevented every great scientific man from being a great patriot and from adding to his country's honour. After the general secretary, Lange, had made a report of the preparations for the Congress, and M. Panum had given the history of the International Medical Congresses, the following vice-presidents were elected:—For England: Sir J. Paget, Sir W. Gull, Sir William Mac Cormac, Sir Henry Acland, Sir Risdon Bennet, Sir S. Wells, Profs. Erichsen, Watson, and Marshall. For America: Billings and Austin Flint. For Scandinavia: A. Key, Dahl, and Hjelt. For France:

Pasteur, Verneuil, Chauveau, Ollier, Jaccond, Hardy, Ranvier, Cornil, Trélat, Lépine, and Bouchard For Germany: Virchow, Kölliker, His, Frerichs, Volkmann, Esmarch, Hensen, Flemming, Hensch, Münk, Liebreich, Liebermeister, and Gurlt. For Austria: Schnitzler. For Holland: Tilanus, Rosenstein, and Engelmann. For Russia: Reyer and Rauchfuss. For Italy: Crudeli and Bottini. For Belgium: Crocq. For Switzerland: Lombard, Prévost, Meyer, and Kollmann. As secretaries were elected—Kronecker, Petit, Owen, Poore. In the evening the President gave a dinner to about 300 members of the Congress. After dinner Sir James Paget spoke for Denmark, Virchow for Copenhagen, Pasteur for the Danish hospitality, and Crocq for Professor Panum.

On Monday, the 11th, the different sections were formed. It was decided that the list of the Danish presidents should stand, with the exception of the section of Laryngology, whose Danish president, Dr. Wilhelm Meyer, was a president also for the Otological section; in his stead Dr. Morell Mackenzie was elected president

The most prominent paper read on Monday was that of Professor Pasteur on Pathogenic and Vaccinia Microbes, which altogether seems to have been the one to which most interest was attached during the Congress. Pasteur's speech was principally a report of the work done in his laboratory during the last four years. His own and his pupils' labour has been entirely devoted to the question of hydrophobia inoculation, and his experiments have been both numerous and thorough. As the results of some of these have already been published, only a brief summary of the first part of the speech can be given. He first called attention to the fact that the characteristic changes of the tissues in animals which had died from hydrophobia are often limited to the medulla oblongata, in which organ the poison producing the disease is found most concentrated and pure. Secondly, to the fact that inoculation of the poison obtained from the medulla oblongata is not always followed by positive results, unless the poison is introduced into the subarachnoid cavity by means of a trocar, after trepanning the skull has been performed. These two facts have been of vast importance in solving the great difficulty in obtaining the poison sufficiently concentrated for experimental purposes, experience having shown that two dogs, both bitten by the same rabid dog, may take the disease in quite different degrees and after longer or shorter periods of incubation. Liability to error may, however, be obviated by pursuing the following method:—Take the medulla oblongata from a dog which has died of rabies, crush and put it into sterilised bouillon, taking all necessary precautions. By introducing two drops of this preparation into the subarachnoid cavity of rabbits by means of a Pravaz syringe, the same results will always be produced; the rabbits will all develop hydrophobia within twelve to fifteen days, neither more nor less. It is, however, necessary to take the poison from dogs whilst the disease is at its maximum, otherwise the period of incubation will be very different. By transferring the poison, originally taken from a dog from one rabbit to another, from a second to a third, and so on, Pasteur has come to the result that after the tenth inoculation the incubation period is reduced to from eight to nine days. After this point the incubation period is of exactly the same length until the fifteenth inoculation, which during the last few days he has succeeded in reaching. Guinea-pigs reached the incubation period proper to them after a shorter series of inoculations, but neither in these animals nor in rabbits or dogs is it possible to weaken the poison by inoculation. Pasteur has, however, succeeded in finding animals in which it is possible. The latter part of the speech was as follows:—"Jenner first propounded the idea that the poison which he called 'grease,' but which we now more accurately call horse-pox, must, before it can be given to man without danger, be weakened in its poisonous effect, if I may use the term, by being transferred to the cow. After this the idea of weakening the hydrophobia poison by introducing it into certain animals seemed worthy of a trial. Many experiments were made, but in the greater number of animals experimented upon the poison only increased in virulence, as, for instance, in rabbits and guinea-pigs; happily monkeys proved an exception. On the 16th December, 1883, a monkey was inoculated by trepanning from the medulla oblongata of a dog, whose rabid state had been confirmed by the fact that it had bitten a child who afterwards died of hydrophobia. The monkey became mad eleven days after. From this one the poison was given to a second monkey, which also became mad in the course of eleven days. A third monkey was only attacked after twenty-three days. From the medulla oblongata of each monkey two rabbits were inoculated. The rabbits inoculated from the first monkey were seized after thirteen and sixteen days, those from the second monkey after fourteen and twenty days, those from the third after twenty-six and thirty, those from the fourth after twenty-eight, from the fifth after twenty-seven, and from the sixth after thirty days. It cannot be doubted after this that by transferring the poison from monkey to monkey and from several monkeys to rabbits, it at last became weakened. In the same way it is weakened in dogs. A dog which was inoculated from the fifth monkey had an incubation period of fifty-eight days, although the inoculation was done by trepanning. Other experiments of the same nature led to like results. Thus, we are now in possession of a method by which the contagious power of hydrophobia is weakened. Inoculations from monkey to monkey produce a poison which, when given to rabbits, has an incubation period which gradually increases in length. If, on the other hand, the poison is given to a succession of rabbits it becomes subject to the law already mentioned, by which it increases in violence when transferred from one rabbit to another. From the application of these facts we obtain a means of inoculating dogs against hydrophobia. As a starting-point is taken a rabbit poisoned from a monkey, which has been inoculated by poison that has gone through so many individuals that it is not able to cause death through hypodermic or intravenous injection. Having now applied this method for protecting dogs against hydrophobia, and having collected a large number of dogs which had been made impervious to infection, I determined, as I had a higher aim in view, and remembering the opposition which Jenner had encountered, to place the results, which, in my opinion, are the ground-plan of the protection of dogs against hydrophobia, before a competent commission. The Minister of Education, M. Tallières, to whom I spoke on the subject, was willing to support me, and he appointed MM. Béclard, P. Best, Bouley, Tisserand, Villemin, and Vulpian to examine the facts which I had already laid before the Academy of Sciences at its meeting of the 19th of May last. The Commission, having chosen M. Bouley as president and M. Villemin as secretary, at once set to work, and I have the pleasure to announce that it has within the last few days sent its first report to the Minister. The Hydrophobia Commission has up to the present experimented on thirty-eight dogs, of which nineteen were from me, and declared to be impervious to contagion, whilst nineteen were unvaccinated. Those dogs which have not died under treatment are still under observation, and will be for some time to come. As far as the condition of those dogs which have been experimented upon is concerned, of the nineteen unvaccinated, three out of six of those bitten have become mad, five out of seven of those inoculated in the popliteal vein have become mad, and all of the five which were inoculated by trepanning have become mad, whilst not one case of hydrophobia has declared itself amongst the nineteen vaccinated dogs. One vaccinated dog died on July 13th from hæmorrhagic diarrhœa, which had shown itself in the first days of July. In order to see whether hydrophobia had had any part in its death, three rabbits and one guinea-pig were at once inoculated by trepanning from its medulla. These four animals are still in perfect health, which is a certain proof that the dog did not die of hydrophobia, but of an ordinary disease. The next report from the Commissioners will treat of the history of twenty dogs, the inoculation of which they will superintend themselves."

Pasteur's speech was received with enthusiastic applause from the numerous audience who had followed with great interest the reading of the paper.

I must defer the conclusion of this report until next week.

STRAY NOTES ON THE CONGRESS.

(By an Occasional Correspondent.)

The President's dinner at the Hôtel d'Angleterre, on the first Sunday evening of the Congress opening, was a very brilliant affair. The guests must have numbered at least two hundred and fifty, and the *menu* of viands, wines, and music could not be excelled for exquisite selection. In form the *menu* is a masterpiece of elegant humoristic art. The guests were soon made acquainted with a Danish peculiarity not very favourable to the digestion of an excel-

lent dinner. Our Scandinavian friends begin the toast list soon after the repast has well begun, and the President rose to do honour to the King of Denmark just when the guests were discussing the relative merits of roast beef à l'Italienne and poulets sautés à la Marengo. When presently Sir James Paget was called upon to propose "Prosperity to Denmark," he playfully referred to the custom of toasting and cheering during dinner, and suggested that, with all deference to the hosts, this was one of those customs almost "more honoured in the breach than in the observance." By common consent Sir James's speech was perfect in matter, form, and delivery, and it rose to eloquence and pathos as he concluded by asking permission to convert the toast into a prayer, "May God preserve Denmark," a sentiment which was responded to with unbounded enthusiasm, all the more telling in that a very large proportion of the guests were Prince Bismarck's countrymen. The dinner over, the sight was a brilliant one, as the crowd of guests descended into the spacious courtyard of the hôtel, covered with glass, lighted by electricity, and decorated with exotic plants. Over Chartreuse and coffee the question was soon mooted amongst various groups of talkers, Where shall the next Congress be?

At the opening ceremony in the morning a fertile theme with speakers had been the superiority of science over distinctions of creed, rank, and nationality. But once more abstractions did not stand the test of serious practical difficulty. When Berlin was mooted for 1887, it soon became seriously questioned whether the international character of the Congress could be maintained in the absence of the representatives of one of the leading European nations. The Parisian crowd once shouted "à Berlin," but were the academicians likely to echo the cry? The mere doubt was almost fatal to the project, and the distinguished American representatives, Dr. Austin Flint and Dr. Billings, saw and made the best of their opportunity. So it has come to be decreed that the next cosmopolitan gathering of doctors is to be on the other side of the "herring pond."

On Monday the sections gathered for work, and as I entered the surgical one, allowing for different sizes of rooms, the attendance at Copenhagen seemed decidedly more numerous than it was when Mr. Erichsen first took the chair at Burlington House three years ago. Professor Panum presided at first, and after referring to the recent and deeply regretted death of Professor Holmer, who had taken a most active part in organising the Congress, Sir Henry Acland, as one who had known him personally, was called upon to express the condolence of his colleagues. This he did in a brief but most apt speech. As he delivered it, I was forcibly struck with the resemblance of Sir Henry as he now is with Professor Sharpey as he looked about twenty-five years ago. The Oxford professor is not quite so massive in build as the veteran physiologist, but the resemblance is most striking. Professor George Buchanan of Glasgow was independently much struck with it, and observed to a mutual friend that he thought it was Sharpey come to life again when he saw Sir Henry at the presidential dinner the previous evening.

Professor Panum now vacated the chair in favour of Professor Volkmann, and the section was in eager expectation for Sir Joseph Lister's promised address on the Listerian Antiseptic Treatment in its present form. But as the baronet was not present Professor Esmarch made a short speech on Malignant Diseases of the Rectum, which was illustrated by schematic diagrams. The *pièce de résistance*, and a very rich and substantial one it proved, was Mr. Thomas Bryant's communication on Lumbar Colotomy as a Curative and Remedial Operation in Syphilitic, Simple, and Cancerous Ulceration of the Rectum and Colon, with an improved method of performing the operation. A very full and well-arranged abstract of Mr. Bryant's paper was in the hands of members, who were thus enabled to follow him through the analysis of his eighty-two cases of colotomy, an unrivalled experience for any one surgeon. Forty per cent. of the whole number of eighty-two cases operated upon died within the month. Of the forty-nine successful cases, sixteen died within six months, eight lived from six to twelve months, twelve from one to five and a half years, five were alive from one and a half to fourteen years after operation, while eight had left the hospital convalescent. The manner of the delivery of the address was worthy of the matter, and, all in all, British surgery could not have had a better representative. Professor Verneuil followed on Inguinal Colotomy, and Professor Trélat on the Lumbar Operation, substantially endorsing Mr. Bryant's teaching and practice. The President then called upon Mr. Sampson Gamgee of Birmingham, who, in compliance with a generally-expressed wish, addressed the section in French. He avowed that, since he had had the personal instruction of Amussat, he had always practised his peration; but his recent observations in Professor Verneuil's clinique, and the experience of his colleagues, Mr. Furneaux Jordan, Mr. Bennett May, and Mr. Jordan Lloyd, in the Queen's Hospital, Birmingham, had convinced him that in well-chosen cases inguinal colotomy was an easy, safe, and efficient operation. The prevailing feeling of the section was a hopeful one as to the possibility of affording great relief in malignant rectal disease by timely and suitable surgical intervention.

If these Congresses are supposed to be holidays, they certainly are very hard-working ones to some of us. What with heat and dust and talk, repose is neither easy nor frequent; and as I am very anxious for a run home through the cliniques of Halle, Berlin, and Vienna, I shall not for the present inflict on THE LANCET readers any more stray notes from the Copenhagen Congress.

HEALTH OF THE ARMY.

No. I.

THE annual report on the health of the army during 1882, which has just been presented to Parliament, shows the strength of the white troops serving at home and abroad to have been 174,557. The admissions into hospital during the year were in the ratio of 1093 per 1000, the deaths 12·06, the discharges by invaliding 19·45, and the constantly non-effective from sickness 54·21 per 1000. With the exception of the invaliding, which shows a slight increase, these ratios were all under those of the preceding year, but the admissions and constantly sick were above the average of the last ten years.

Among the troops serving in the United Kingdom the admissions amounted to 852, the deaths to 6·94, the discharges by invaliding to 24·55, and the mean daily sick to 47·12 per 1000, in a strength of 86,847 non-commissioned officers and men. These are all lower than in the preceding year except the proportion invalided, which shows an increase of 2·36 per 1000, a result probably of the Egyptian campaign. The reduction does not appear to have been confined to any particular class of diseases. The admissions and deaths from enteric fever amounted to 2·0 and ·47 per 1000 of the strength, being more than double the proportion which occurred in 1881. The increase is stated to have been principally due to its occurrence among men recently returned from active service in Egypt. This was especially the case in the Home District and at Aldershot. In Dublin, where 27 cases and 5 deaths occurred, several of the cases "originated in the Royal Barracks, which are reported to have been badly constructed originally, too close to the river Liffey, and to have faulty drainage; various sanitary improvements have since been undertaken." Scarlet fever prevailed in a severe form at the Curragh from May to October, causing 35 admissions and 3 deaths; it was also prevalent at Chatham, where there were 23 cases with 1 death. Erysipelas was the cause of 269 cases, with 4 deaths; the largest number occurred at Aldershot, where the principal medical officer was unable to trace them to any insanitary condition either of the quarters or the neighbourhood. The Dublin and Cork districts furnished the next highest proportion of cases, and 3 out of 4 deaths occurred at the Curragh. Comparing the different military districts with each other, the Dublin district is found to furnish the highest ratio of admission, and the southern district the highest of deaths and constantly sick. This result, as regards the latter, is probably to a great extent due to the number of regiments returning from foreign service which arrive at Portsmouth, bringing with them cases of chronic disease, often in an advanced stage.

The returns by arms of the service show the admissions to have ranged between 573 per 1000 in the Royal Engineers and 956 in the Foot Guards; the deaths between 6·32 in the Household Cavalry, and 9·69 in the regimental depôts; and the mean sick between 29·78 in the Royal Engineers and 51·82 in the Foot Guards. Although the Royal Engineers had the lowest rates of admissions and daily sick, they fur-

nished the highest ratio of deaths, except the depôts, amounting to 8·16 per 1000, the Foot Guards coming next with a ratio of 8·14 per 1000. We regret to observe the omission from the present report of the table hitherto given of the deaths to the end of the year among invalids discharged to pension from the different arms, as they ought to be added to furnish a fair statement of the death-rate of our troops at home. No reason has been assigned for the omission. The sickness and mortality among the officers serving at home are stated at 311 and 4·64 per 1000. Among the women, the cases, exclusive of parturition, were 439 and the deaths 8·10 per 1000; and among the children the attacks of illness were in the ratio of 490 and the deaths 26·79 per 1000, nearly one-fourth of the cases being measles.

At Gibraltar, in an average force of 4558 men, the ratio of admissions into hospital was 817, of deaths 10·31, of invalids sent home 14·70, and of constantly sick 50·35 per 1000. These results do not differ materially from those of 1881, except as regards the deaths, which have been more than doubled; all the ratios however, except the invalids sent home, are considerably above the average of the last ten years. The excess of deaths was chiefly due to enteric fever, and, though to a less extent, to fatal injuries. In the returns 40 cases of enteric fever appeared, of which 18 proved fatal. The surgeon in charge of the station hospital attributed the prevalence of enteric fever to deficient rainfall, but Surgeon-General Smith states that the troops were well supplied with good water, and believes it to have been mainly due to the fact that, owing to the change of troops in connexion with the Egyptian campaign, the garrison was almost entirely composed of unacclimatised soldiers just arrived from England. "The younger men on first arrival suffered much from fever, which in many instances assumed the enteric form, with the high rate of mortality of that disease."

The strength of the troops in Malta, exclusive of the Royal Malta Fencible Artillery, was 4619. The admissions into hospital were in the ratio of 804, the deaths of 8·88, the invalids sent to England of 36·37, and the mean daily sick of 52·35. With the exception of the invaliding, these results compare very favourably with those of the preceding year, and the admissions and deaths are both under the average of the last ten years. The reduction in the admissions has been chiefly in fevers, and in the deaths in fevers and tubercular diseases. The reduction in the amount of fevers would probably have been still more marked but for the arrival of four regiments from England, three of them at the hottest period of the year, to relieve corps which were ordered to proceed for service in Egypt. The influence of this circumstance upon the sickness and mortality in the command may be estimated by the fact that the *annual* ratio of admissions and deaths in five line regiments which were in the island at the beginning of the year was 645 and 5·87, while in the four regiments which arrived from England during the year it was 1229 and 12·58 per 1000. Enteric fever furnished 78 cases and 13 deaths, being in the ratio of 16·9 and 2·81 per 1000 of the strength, October and November being the months in which it was most prevalent. It is stated that it was impossible "to trace the disease to any definite cause or to any insanitary condition of the barracks themselves."

The admissions and deaths in the Royal Malta Fencible Artillery amounted to 606 and 12·62, and the constantly sick to 22·81 per 1000 in an average strength of 317. The sickness was considerably under, but the deaths double, the average of the ten preceding years; but the numbers are too limited to justify any positive deductions. A new scale of rations was introduced into the corps during the year, and the change is favourably reported upon by the medical officers.

The average force at Cyprus during the year was 595; in September and October it consisted chiefly of the depôts of corps serving in Egypt; before and after these months it was composed of a wing of a line regiment and detachments of Royal Engineers and Departmental Corps. The ratio of admissions into hospital during the year was 1024, of deaths 11·76, and of constantly sick 46·89 per 1000; all in excess of the results for the previous year. The excess of sickness and mortality was probably due to the arrival of troops in the hottest and most unhealthy season of the year, and to the 1st Battalion Royal West Kent Regiment landing in the island from Egypt, after the termination of hostilities, "in a most sickly and debilitated condition." There were 21 cases and 3 deaths returned under the head of enteric fever, but in all except two cases the disease was believed to have been contracted in Egypt.

In the Dominion of Canada, the average strength of the force stationed at Halifax, N.S., was 1892, and consisted of Royal Artillery, Royal Engineers, two line regiments and detachments of the Departmental Corps. The admissions into hospital were 710, the deaths 3·70, the invalids sent home 11·10, and the constantly sick 32·88 per 1000 of strength, all lower than in the preceding year, and the deaths only half the average of the last ten years. No case of enteric fever occurred; the most prevalent diseases were tonsillitis, dyspepsia, and diarrhœa.

At Bermuda, in a force of 1446, the admissions into hospital were 661, the deaths 8·99, the invalids sent home 15·91, and the constantly sick 33·04 per 1000. Except the invaliding, these ratios are very slightly above the average of the last ten years. The excess in the admissions was chiefly due to venereal diseases. Dengue prevailed as an epidemic among the civil population, but affected the troops to a very slight extent. There were 21 cases and 2 deaths from enteric fever; 14 of the cases occurred at Prospect Island, but could not be traced to any local cause.

In the West Indies, the average strength of the white troops was 492 non-commissioned officers and men, among whom the cases amounted to 675, the deaths to 10·16, the invaliding to 10·16, and the mean sick to 37·28 per 1000, results much under the average of the last ten years. The reduction in the admissions and deaths was almost entirely in the class of fevers, which furnished only 45 and 2·03 per 1000 of the strength. There was no case of yellow fever, which prevailed so much at Barbadoes in 1881, and only one case of enteric fever at Newcastle, Jamaica. Among the black troops, averaging 1120, the ratio of admissions was 1029, of deaths 16·96, of invaliding 41·96, and of mean sick 59·47 per 1000—results which, although they differ but little from the average of previous years, contrast very unfavourably with those of the white troops. Tubercular diseases were the principal causes of the mortality, and next to them diseases of the digestive system. Syphilis and gonorrhœa were the most prevalent diseases, and together furnished more than one-fourth of all the cases.

On the West Coast of Africa, the admissions from a force of 580 black troops amounted to 1247, the deaths to 27·58, the invaliding to 1·72, and the mean sick to 60·84 per 1000; the ratio of deaths was slightly above, but the other ratios considerably under, the average. Tubercular diseases were the chief source of the very high rate of mortality, one-half of all the deaths having resulted from them. Gonorrhœa, paroxysmal fevers, and diseases of the digestive system were the principal causes of admission into hospital. The cause of the great mortality from phthisis among the black troops in the West Indies and West Africa is a subject deserving careful investigation.

The average strength of the force employed at the Cape of Good Hope and St. Helena was 3944. The admissions into hospital were in the ratio of 697, the deaths of 19·52, the invaliding to England of 33·72, and the mean sick of 56·83 per 1000. These, except the mean sick, are much below the average of the preceding ten years. The high ratio of mortality was due to enteric fever, for if it were omitted the death-rate for the year would only be 7·60 per 1000. There were 240 cases and 47 deaths returned under this head, all of which occurred in Natal. These numbers give the proportion of 61 cases and 11·92 deaths per 1000 of the whole force in the command; but if calculated on the strength of the troops in Natal alone, averaging 2701, the cases would be 88·8, and the deaths 17·40 per 1000. At the close of 1881 this disease was very prevalent among the troops in Natal, and continued so during the first quarter of 1882, when it abated, and only 8 cases and 4 deaths occurred in the second quarter. The principal medical officer attributed the disease to the impure water supply at the up-country stations in Natal, "where the water-supply was, in all, open to serious objections, but unavoidable in camp life." At Cape Town small-pox was epidemic among the civil population, but only two cases occurred among the soldiers, 1038 in number.

In the Island of Mauritius, the admissions into hospital from the average force of 382 amounted to 2476, the deaths to 13·08, the invaliding to 23·56, and the mean sick to 95·18 per 1000. This very high ratio of admissions, which is considerably above that of 1881, was chiefly the result of the continued prevalence of paroxysmal fevers, which amounted to 14·50 per 1000, though fortunately attended with a com-

paratively low rate of mortality. The disease seems to be generated at Port Louis, as the senior medical officer states "that there does not appear to have been a single admission from malarial fever at Curepipe unless the patient had suffered from the disease previous to his being sent there." Unfortunately, he does not tell us what proportion of the force is quartered at each of these stations respectively. Surely some steps might be taken, and certainly ought to be taken, to find a more healthy spot in which to quarter the troops, when in their present barracks one-tenth of the force is constantly in hospital, and the cases of fever alone are in the proportion of three attacks to every two men. Any reasonable expenditure should be incurred to save our soldiers from such unnecessary deterioration of health and efficiency. Is there any imperative necessity for keeping the troops quartered at Port Louis?

HOME HEALTH RESORTS.

No. II.

THE picturesque village of Shelfanger, near Diss, in Norfolk, has recently assumed a position of some prominence, owing to the discovery of a valuable spring of natural mineral water. The water is said to be most palatable, and has been analysed by Professor Attfield; the chief ingredients are carbonates of iron and magnesia. A capital residence for the reception of visitors has been fitted up, and the grounds have been made as attractive as possible. Two of the principal features of the place are the artistic drinking-fountain and the covered swimming-bath. An observatory has also been erected on the premises, from which fine views of the surrounding country may be obtained.

Ilkley, which was formerly known as the Mountain Spa, is situate on the southern slope of the beautiful Wharfe valley, with the extensive range of Rumbold Moor in the near distance. The walks in the immediate neighbourhood are plentiful and picturesque, and the scenery within a few miles of the spa is said to be amongst the finest in England. The hydropathic establishments are numerous and well appointed, and that known as "The Spa" has good chalybeate springs. There are several good hotels, and private lodgings can be had. The site is about 700 feet above the level of the sea. The cold waters are derived from rocky streams, which are for the most part at about a temperature of 47° F. Bathing and drinking are both practised at this resort. Scrofula, diseases of deficient vitality, stiff joints and muscular contractions, and gastric irritability, are the chief diseases which have been benefited. Ben Rhydding is situate in this elevated and bracing region of Yorkshire. Malvern, Matlock, and Sudbrook-park, are all celebrated for their cold-water cures.

Clifton has its particular advantages of temperature, air, and locality, which, in the hands of a judicious practitioner, might be made available in many cases where probably no other situation or measure would avail. Fifty years ago the misnamed Hot Wells of Clifton were more spoken of than they are now. The temperature of the springs is about 73° F. Though not insipid, the taste of the waters is hardly so pleasant as those of Malvern or Ilkley. The chemical constituents are few and simple; the whole amount of them in a pint of water is about eight grains, sulphate of soda being one of the principal ingredients. Clifton is built in terraces on the southern declivity of a hill of carboniferous limestone and hard sandstone. The soil rapidly becomes dry, and the air appears to be less humid than on the South Devon and Cornwall coasts, and the fall of rain seems to be less. The winter temperature is about three degrees cooler than at Torquay. The houses in the neighbourhood of the Bristol Hot Wells, near the bottom of the hill, are the most sheltered. There is good ground for exercise, and the surrounding country is attractive

Woodhall ought to be a very important English spa; it is situated between Boston and Lincoln. According to Mr. Caffe's pamphlet on this spa, a gallon of water contains 1215 grains of chloride of sodium, 105 of chloride of calcium, 86 of chloride of magnesium, rather more than 5 grains of bromide of sodium, and more than 2·5 grains of iodide of sodium. Although this resort has got the name of the "Iodine Spa," it is probable that the iodine plays only a secondary part in its therapeutic action, as is the case with the "Haller Iod-Wasser," or of the "Adelheidsquelle." Braun is therefore inclined to ascribe the good effects of the Woodhall waters to the chlorides and other conditions, rather than to the iodide and bromide.

The Beulah Spa, near Norwood, appears to be once again rising in public estimation; the waters contain 61 parts of sulphate of magnesia and 9 of sulphate of soda, and belong, therefore, to the class of bitter springs, which are mostly prized for their purgative tendencies.

The Furton Spa, near Swindon Junction, ought to prove useful in many cases if methodically used under medical guidance and with a proper régime. It contains 23 grains of the sulphates of soda and magnesia, with 10 grains of sulphate of lime, 3·6 of carbonate of potash, and 4·2 of chloride of sodium, and is impregnated with 6 cubic inches of carbonic acid, in which most English and also most foreign bitter waters are defective. The mild aperient effect is, however, somewhat counteracted by the large proportion of gypsum.

Cheltenham waters may be classed both among the salt and bitter springs. No. 4 Montpellier contains 52 grains of chloride of sodium to the pint. The sulphates consist of 17·2 grains of sulphate of soda and 14·2 of sulphate of magnesia. The constitution of Pitville saline water is similar, though not identical. The principal defects of these waters are the small proportion of carbonate of soda and carbonic acid; but these might be remedied by the addition to every tumbler of a certain quantity of Bilin or Fachingen or Vals water, and the temperature might be regulated according to the individual cases. If this suggestion were carried out, and the local practitioners became thoroughly interested in the methods of administration, there seems to be no reason why Cheltenham and also Leamington should not again become much-frequented and useful watering-places, the more so as in many instances they could be resorted to also in early autumn and even winter, on account of the greater mildness of climate as compared with continental spas. Cheltenham also possesses a fairly strong chalybeate, with ·83 grain of ferrous carbonate, 6 grains of other salts, and an amount of carbonic acid sufficient for use at the well, though not for transmission. The summer temperature of Cheltenham is stated by Dr. Macpherson to be 2° cooler, and the winter temperature 3° warmer, than that of London.

Leamington may also as reasonably be classed with the mixed sulphated waters as with muriated. These cold springs contain no sulphate of magnesia, but only sulphate of soda, ranging from 28 to 40 grains per pint in different springs. The saline spring contains, in addition to 40 grains of sulphate of soda, 40 of common salt, 20 of chloride of calcium, and 3 of chloride of magnesium, with traces of iron, bromide, and iodine, and 2 cubic inches of carbonic acid. The saline chalybeate contains only 32 grains of sulphate of soda, with over 60 of chloride of sodium, 20 of chloride of calcium, and 12 of chloride of magnesium, about 1 grain of iron, and 3 cubic inches of carbonic acid. There are, besides, a sulphuretted saline and several other springs. The advantages of the springs for some cases are obvious, and the defects for others might be remedied by warming and the addition of other mineral waters.

Builth, in North Wales, may before long take a high place as a health resort; the saline waters are the principal ones, though there are also weak sulphur wells. We have been informed that barium chloride exists in appreciable quantities in some of the springs.

PROFESSOR MAX VON PETTENKOFER ON CHOLERA AFLOAT.

IN the scientific supplement to the *Allgemeine Zeitung* of Munich (August 13th, 1884), this well-known authority on hygiene takes up the question of the occurrence of cholera at sea. He restricts his investigation to the outbreak just thirty years ago on board H.M. flagship *Britannia* during the Crimean war, an outbreak on which a report was written by Dr. Milroy, but of which an eye witness has just enabled Professor von Pettenkofer to give a fuller and, in present circumstances, a more interesting account.

The *Britannia* was in the spring of 1832 fitted out as a

flagship; spent the first year chiefly at Malta; went in August, 1853, to Besika Bay; in October to Constantinople, where she remained the whole winter; and in March, 1854, after the declaration of war, to Varna. With the exception of a short run to Odessa and Sebastopol, she was there the whole summer. In August the cholera broke out, at first among the troops on shore. Till then the ship and the whole fleet were in perfect health. It was thought that the French had brought the cholera with them from the Dobrudscha, whither some regiments had been sent from Varna. Few of these returned, the majority having succumbed in the lower levels of the Danube to cholera, typhus, and malaria.

The cholera among the land troops having ceased, it broke out in the fleet, but in very unequal proportions. There were then lying off Varna fifty-four English, French, and Turkish vessels of the line, with a host of smaller craft. The *Britannia* lay on August 20th in Kavarna Bay, fifteen leagues from Varna. Some hundred yards from her lay two other English three-deckers, the *Trafalgar* and the *Queen*, each, like the *Britannia*, with a crew of 1040 men. The *Britannia* lost 139, the *Trafalgar* 6, and the *Queen* 4 from cholera. On the French and Turkish ships the case was similar. It is remarkable that the French flagship, equally with the English, was most violently attacked. It lost 162, among them three officers. Throughout the malady the French flagship (*Ville de Paris*) remained at anchor in the roads with the rest of the fleet. The *Britannia* put out to sea in hope of bettering herself. How this was disappointed we know. While, then, the cholera on board the *Britannia* when anchored in the roads, and still more when on the high seas, dealt such fearful destruction, a fact quite inexplicable on the contagionist theory manifested itself. Of the (about) sixty officers serving on board, from the septuagenarian admiral to the youngest midshipman, not one was even ill. On their imperative return to Varna, the crew were accommodated in transport ships, while all the officers, of their own free choice remained on board the *Britannia*, "partly," as Professor von Pettenkofer's informant says, "to restore the courage of the men, partly out of convenience; and even then not a soul of them was sick. I slept in an empty cabin on the lowest deck, in spite of the physician's warning," and nothing came of it.

Now for the cause why on board the *Britannia* the cholera was so severe, while on board the *Trafalgar* and the *Queen* it was so very mild. Had the outbreak in the ship been due to the presence of cholera patients, cholera linen, and so forth, this circumstance was common to the other vessels. Dr. Milroy has already tried to explain the excess of the malady in the *Britannia* from another cause, which certainly might have had effect, not on the specific infection, but on the development of the disease in the individual subject. At night, after the numerous cases of diarrhœa and cholera had counselled removal to the high seas, it was necessary to shut the lower portholes. According to him, the men seemed poisoned with the foul air they breathed all night through. A more striking example, in his opinion, of the deadly effects of impure air in the time of an epidemic, and of the infallible means of checking them, could not be conceived. The immunity of the officers, he thinks, on this occasion was doubtless a consequence of the ampler breathing space they had at command. This explanation Professor von Pettenkofer admits to be one which must satisfy the practical physician whenever it is his business to find an opportune cause for an unexpected occurrence. "I, too," he says, "hold foul air as injurious, but not as sufficient to account for such an explosion of cholera. In the case before us we must not forget that it was on account of her heavy sick list that the *Britannia* had already sought the high seas. Then we must bethink ourselves of those cases in which, despite the most liberal ventilation, the cholera could not be got rid of—as witness the well-known epidemic on board the *Windsor Castle*. Finally, it would still have to be investigated whether there were not other ships which, coincidently with the *Britannia*, were heavily visited with cholera, and which had the lower portholes open. My informant has set my mind completely at rest on this point, that the crew of the *Britannia* were not inhaling such foul air as Dr. Milroy's report made me suppose."

Professor von Pettenkofer's eye-witness (a young naval officer on board the *Britannia*, who lived and served throughout the whole visitation) corrects another erroneous assumption. The professor had concluded that the shutting of the lower portholes was caused by stormy weather. It was not so. On the day of the departure from Kavarna Bay a calm came on; instead of the wished for cool breeze, the sun blazed down on the cholera-stricken vessel. In addition to this a ground-swell occurred, causing long, oily-looking waves without wind. As a consequence, the ship swayed so that the hatches of the lowest cannon-deck, where the men slept, had to be shut. And now came the terrible night in which fifty-eight men died—a night without wind, without a pulsation in the sultry air. Storm there was none; would that there had been! The closing of the hatches had no influence in producing the mortality, for, on account of the heat, the men did not sleep in their hammocks, but were allowed to lay themselves down where they pleased, the majority bivouacking in the open air on deck and on planks. The physicians themselves had given the order, and it was precisely in the open air that most of the men died. It may be remarked that the *Ville de Paris*, which remained in the roads, lost as many as the *Britannia*, though her hatches and portholes were wide open.

The bad air theory, from the shutting of these ventilators, thus falls to the ground. Equally futile, as explaining the cholera explosion, is the contagion theory. That a cholera patient with his evacuations or cholera-linen came on board accounts for nothing, for many other ships had the same thing occurring to them, and no evil results followed. But perhaps the infective matter was brought to the *Britannia* in the food or drinking-water used only by the crew. On this point Professor von Pettenkofer's informant is decisive: "Provisions came daily from shore, even during the epidemic, when we were fifteen leagues from Kavarna Bay, but the officers ate the same meat, the same vegetables, the same fruits as the men. The only difference was that the crew drank rum-and-water and the officers wine; while in the drinking-water no distinction was observed." Nor was the ballast from the shore a vehicle for bringing the infective matter on board the *Britannia*, which used neither sea-sand nor rubble, but, as on all English vessels of war, only iron—the so-called pig-iron—in square pieces, wedged together in the lowest ships spaces, and never disturbed.

Nothing remains to account for the outbreak but the previous communication of crews and officers with the shore. Professor von Pettenkofer again quotes his eye-witness:—"The sick, not only on board the *Britannia*, but on all the other vessels of the allied fleet, had, before the cholera visitation, while we lay in Varna, regular communication with the land, and our men—there is no denying it—frequented the same boozing kens and places of lascivious resort, which cropped up in the town like mushrooms." As the *camaraderie* of regiments on land and ships' crews ashore leads to this—that the one will patronise one place of rendezvous, and the others by preference another, so, concludes Professor von Petterkofer, "we may assume that the cholera locality on shore was the seat and the occasion of infection (*Infectionsgelegenheit*), that individual and specially infected resorts were haunted by the men from one ship more than by the men from another, and that many lingered in this or that house oftener or seldom, for a longer time or a shorter." He leaves it an open question whether the infective matter engendered in the locality was inhaled by the men or whether they took it in what they ate or in what they drank. If, he thinks, we consider the facts without prejudice, we shall find no possible proof of the contagion theory, but only that of the localistic theory (*localistische Anschauung*) of cholera diffusion and infection.

In emigrant ships the manifestation of cholera obeys the same laws as in war-vessels, and the question to ask is, where those who fall ill on board have been on land before embarking. "My attention has just been drawn," the Professor says, "to the fact that 11 cases which occurred in the *Westphalia*, between Hamburg and New York, from Aug. 27th to Sept. 10th, 1873, belonged all of them exclusively to two German families, and that quite as severe an epidemic as that on board the *Britannia* was possible, had the majority of the other passengers before their embarkation lived together or been in similar circumstances with the said two families." That this here and there actually occurs is proved by the epidemic outbreaks exceptionally taking place in emigrant ships. That the *Britannia* as a vessel was not a focus of infection may be seen from the 60 gallant officers who remained unaffected on board.

Prof. von Pettenkofer hopes some one of the European maritime powers, during the cholera invasion, will organise a commission to make minute investigations on the occur-

rence of the disease in ships, and on any etiological momenta antecedent to it, although, he says, a similar proposal made more than ten years ago met with no response.

THE CHOLERA EPIDEMIC.

ALTHOUGH there has been no material extension of the epidemic at Marseilles and Toulon, yet the steady recurrence day by day of some eight to twelve deaths in the former and of some two to six deaths in the latter place is sufficient to cause anxiety, especially in view of the continuance of the almost tropical weather on the Mediterranean coast. With the advent of colder weather a more rapid diminution of the outbreak might reasonably be anticipated. A considerable number of places in the departments of Bouches du Rhone, Var, Basses Alpes, &c., are continually reported as having suffered from cholera deaths, but the facts that no large mortality occurs in any one place and that localities alleged to be infected one day are not heard of again gives reason to hope that some of the attacks are only of the sporadic type, and that the others fail to get that hold upon the places in which they occur which is so characteristic of Asiatic cholera during the period of its diffusion. Some recent rumours as to the extension of the epidemic to the north of France were evidently not justified. In Italy the disease has extended, and deaths are reported from the provinces of Campo Basso, Cuneo, Parma, Massa Carrara, Port Maurice, Cosenza, and Turin. None of the outbreaks are on a wide scale, but the Italian Government has despatched large bodies of troops into the provinces of Campo Basso and Cosenza, for the purpose of again trying the effect of the sanitary cordons which have hitherto so signally failed.

The account which has been published as to the alleged death from Asiatic cholera in Birmingham fully justifies the caution which we gave last week as to the inexpediency of basing alarming rumours on a single attack, which might exhibit symptoms which, though resembling those of true cholera, are also often met with in the severer cases of the sporadic disease. In the temporary absence of Dr. Alfred Hill, whose mature judgment, based on a lengthened experience, would have been opportune had it been available, the Mayor has sought the advice of Mr. Waterson, surgeon to H.M. Prison at Birmingham, and on his authority it is officially announced that the case was simply one of English cholera.

OFFICIAL CHOLERA REPORTS.

In view of the prevalence of cholera on the Continent and of the possible invasion of this country, the Local Government Board have issued a reprint of a number of reports which have at intervals been made to them and to the Privy Council Office, together with the comments which have been made concerning them by their several medical advisers, including Mr. Simon. Dr. Buchanan introduces the set of papers by a preliminary report, in which he sets forth the object of the reissue, it being intended both to exhibit the doctrines concerning cholera in Europe which have been continuously held by the principal medical advisers of the English Government, and further, to indicate the local conditions provocative of cholera in England. For these purposes the publication has considerable value, for the principles which Mr. Simon and his successors have so long and so successfully laboured for are fully set out, and the detailed reports by Mr. Netten Radcliffe, Dr. Buchanan, and the late Drs. Parkes and Seaton, on actual outbreaks, including some of considerable historic importance, cannot fail to be extremely helpful in guiding those who may at any moment have to conduct similar inquiries in their own districts. The publication, which can be procured as an official paper for a few pence, deserves a wide circulation amongst medical officers of health.

QUARANTINE AND INFECTED PORTS.

THE *London Gazette* of the 15th and 19th inst. contains notifications to the following effect:—

All merchant vessels whatsoever arriving at Greek ports, unless furnished with a visa of the Greek consular authorities, will be subjected to a quarantine of five or of eleven days, at the discretion of the sanitary authority.

The Italian coast, from the French border to Civita Vecchia, has been proclaimed under suspicion of cholera. The ports of the Gulf of Genoa have been declared by the Portuguese Government to be infected with cholera.

At Buenos Ayres, eight days' quarantine will be imposed on all vessels arriving from Toulon and Marseilles or any other port in which cholera has shown itself; should a case of the disease have occurred during the voyage, the quarantine will be extended to fifteen days.

Vessels arriving at the Danish West India Islands will be subjected to strict investigation, and a quarantine of fourteen days imposed on those on which a suspicious case of cholera has occurred.

A quarantine of sixty days or more is imposed on arrivals at Ship Island Harbour, Mississippi, from cholera-infected ports.

The term of quarantine for ships arriving at Sicily and Sardinia has been increased to twenty-one days.

THE BRITISH PHARMACEUTICAL CONFERENCE.

THE meeting of this Conference, on the 13th instant, was devoted to the reading and discussion of papers, the programme containing a total of twenty-eight contributions.

The alkaloid value of commercial and of wild belladonna was the subject of a final report by Mr. A. W. Gerrard; that of atropa belladonna the subject of a report by Messrs. W. R. Dunstan and F. Ransom; and Mr. T. J. Hasselby contributed some notes on the growth of belladonna and hyoscyamus; English rhubarb was the subject of two papers by Mr. W. Elborne; and Messrs. W. R. Dunstan and F. W. Short contributed a report of an investigation, aided by the Research Fund of the Conference, on the chemistry, botany, and pharmacy of the strychnos nux-vomica.

The suggestion that preparations of nux-vomica should be standardised was followed by papers on the standardising of pharmaceutical preparations, by Mr. G. F. Schacht and Mr. D. B. Dott. In the course of his paper Mr. Schacht said that suggestions had recently been made for standardising some of our galenicals. He considered these suggestions to be unwise, and mainly because they involve an assumption of knowledge concerning them that is not possessed. He regarded remedies in this connexion as divisible into two classes—first, definite chemical substances and their diluted forms, which lend themselves naturally to standardising, and cannot be too exactly standardised for employment in medicine; and, secondly, remedies of mixed and variable constitution. These cannot, with our present knowledge, be standardised in a way to convey the truth as to their medicinal potency, and therefore must form a class of more or less vague medicinal value. In the progress of the art of medicine from empiricism to science, it is probable much more exact knowledge concerning substances occurring in the latter class will be arrived at, and then such remedies may properly pass into the former class. But the work connected with this progress is chiefly medical work, and pharmacy can only follow and assist; it certainly cannot pretend to lead. Mr. Dott remarked that in order to standardise preparations of a drug it was necessary that the amount of active principle or principles be capable of accurate and reasonably easy determination. This rule excluded a large section of the materia medica, as there is a host of drugs whose active principles are unknown or incapable of exact determination. It is only practicable to standardise preparations of those drugs which readily yield their active principles in a state of comparative purity. An objection to standardising pharmaceutical preparations was that the operation could only be safely performed with an amount of knowledge and experience which would not be always available. A serious error in analysis might lead to greater variations in strength than the pre-standardisers ever dreamt of. Taking all the facts into consideration, no general system of standardising ought to be introduced into the British Pharmacopœia.

After papers had been read by Mr. W. Martindale on the composition of seidlitz powders, and by Mr. T. Greenish on the pharmacy of linseed, Mr. W. Southall reported the result of a microscopical examination which he had made of a specimen of a fungoid plant, the Tasmanian native bread. He came to the conclusion that the plant may be considered a mycelium or the sclerotioid-mycelium of a fungus of which

the other stages of growth have not yet been discovered. The specimen weighed when fresh 37 lb.

The composition of gray powder, of blue pill, and of blue ointment was treated by Messrs. M. Dechan and T. Maben; sesame oil as a basis for lead plaster was further reported upon by Mr. T. Maben, whose later experiments led him to form a more decided opinion in favour of it than he could have given a year ago; commercial Peruvian balsam was reported upon by Mr. P. MacEwan, who found twelve samples to be pure; Mr. T. S. Dymond compared the two processes of testing the amount of diastase in extract of malt, which is becoming a popular remedy; Mr. J. R. Hill called attention to the possibility of pharmaceutical preparations being contaminated by the copper of the vessels in which they are prepared; Mr. R. Wright recommended the use of hydrochlorate of quinine instead of the sulphate of quinine in the preparation of the tincture; and the presence of iodine in cod-liver oil and other marine products was reported upon by Mr. E. Stanford, who stated that in Anglo-Portuguese oysters the proportion was too small to be of use. Sulphurated lime having come into use as a remedy for boils, Mr. T. Dymond compared the different processes of making it; Mr. D. Hooper contributed elaborate analyses of some old cinchona barks.

The papers disposed of, it was determined to hold the next meeting at Aberdeen. In the election of the officers Dr. J. C. Thresh of Buxton, was associated with Mr. Plowman of London in the honorary secretaryship. Mr. J. B. Stephenson of Edinburgh was elected President and Mr. A. Strachan of Aberdeen local secretary.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Fever and Diphtheria in the Romford Rural District, by Dr. PARSONS.—The rural portion of the Romford Union contains a population of 21,862, and it has suffered from several outbreaks of fever and diphtheria during recent years. In the end of November, 1883, enteric fever appeared at Victoria Cottages, Dagenham—a row of twenty-nine cottages and a public-house lying in an open situation. Here conditions very typical of the district were found to exist. Slop-water goes into cesspools overflowing into an offensive ditch, and cesspit privies prevail. At either end of a row, the soil of which is thus in danger of being befouled, is a well, and a wet boggy site discoloured with black fetid matter having been selected, it was found that paraffin oil poured down here found its way within three days into the well, the water from which on analysis showed a high proportion of nitric acid and albuminoid ammonia; the sample also exhibited microscopic constituents probably derived from household waste. All the cases of enteric fever, eleven in number, occurred in twenty-three houses using this water, the remaining seven escaping. Again, in the winter of 1882–83 a considerable outbreak of enteric fever took place at Great Ilford, fifty-nine persons in thirty-five households being attacked. The medical officer of health aptly describes Ilford as "ripe for the outbreak of a serious epidemic of typhoid fever, should the germs of the disease be introduced, as a corn-stack is ripe for the flames should a lighted match be applied to it." But little is known of the sewers there, except that they are unventilated; cesspool drainage also exists, leading to soakage and overflow into a gravelly soil, with consequent nuisance on the surface. No proper precautions exist to prevent the escape of foul air into houses, either from drains or cesspools; and so-called waterclosets without water also exist. It is possible that at the onset the disease had its origin in an infected milk-supply. The date, however, at which Dr. Parson's inquiry was made prevented the circumstances as to the earlier history of the cases being submitted to an exhaustive examination. But it is clear that, so far as diffusion is concerned, the faulty sanitary conditions we have adverted to, and especially the facilities for the escape of infected sewage exhalations into and about houses, must materially have conduced to increase the outbreak. Enteric fever also prevailed at Barkingside in the autumn of 1881, in a locality where drinking-water is so scarce that it has to be imported by cart, and where the supply for so-called washing purposes is from a sewage-polluted brook. As regards diphtheria, independent groups appeared in and about Chadwell-heath, Dagenham, in the winter of 1883–84, the locality being one where cesspools overflow into nearly stagnant roadside ditches. Other outbreaks, apparently due to importation, or at times associated with cases of scarlet fever and of so-called "croup," occurred in other localities. Of Dagenham, where some of these cases took place, it is stated that most of the houses are old and dilapidated; there is no sewerage; the house-slops run into ditches, cesspools, or pits; sewage nuisances are frequent in the neighbourhood of houses; the privies are ill-made and offensive, and are too near houses; and water is obtained from wells sunk in a porous gravel-bed, and which are suspiciously near to privies, cesspools, and other sources of contamination. Conditions such as these have now existed for a long time in this rural district, and although small works of improvement have been carried out from time to time, no measures of a comprehensive character have been adopted. The authority have, however, now approved of a work of sewerage to include Ilford, Chadwell-heath, and Barkingside. In connexion with the diphtheria it may be noted that much of the district lies to the north of the Thames, where it is bordered by a belt of alluvial marshes about a mile wide; to the north of this is an extensive plain of gravel, resting on London clay; and still further north the district is hilly, the soil being composed mainly of the London and boulder clays.

Diphtheria and Typhoid at Calne, by Dr. BLAXALL.—So far as diphtheria is concerned, this report gives an account of a somewhat large prevalence of the disease which, in so for as its spread is concerned, had mainly to do with intercommunication between sick and healthy at one of the elementary schools in the place, and also as regards one portion of the outbreak, with infection conveyed through a servant girl. The report does not succeed in unravelling the mystery which so often attaches to first cases of this disease, but it is able to show once again the imperative importance of having at hand some available means for the isolation of the first attacks which come under observation. A want of definite regulations to govern school attendance with a view to guard against children being sent to school in an infective state was also matter of comment, and this subject is one which unquestionably calls for some general attention in the future, especially in connexion with refusal to re-admit children from infected localities and houses, except on a medical certificate of freedom from danger. The outbreak of enteric fever was a localised one, brought about in the main by faulty drainage arrangements, and one of the principal recommendations attached to the report relates to the need for action to remedy the defects both in the sewerage and drainage of the place. Calne was inspected by Dr. Blaxall in 1874, and although improvements have been made since that date, yet much remains to be done as regards the system of cesspit privies, the systematic and frequent removal of refuse, and the special nuisances attaching to pig-keeping in a town where some 300 pigs are daily slaughtered.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 16th inst., 5781 births and 4052 deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which in the three preceding weeks had declined from 24·9 to 21·9 per 1000, rose last week to 24·1. During the first seven weeks of the current quarter the death-rate in these towns averaged 22·8 per 1000, against 20·1 and 20·2 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 17·4 in Bristol, 18·5 in Derby, and 18·8 in Huddersfield. In the other towns the rates ranged upwards to 30·6 in Oldham and in Portsmouth, 31·1 in Bolton, and 43·3 in Wolverhampton. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had steadily declined in the four previous weeks from 1257 to 911, rose again last week to 1108; these included 789 from diarrhœa, 103 from measles, 68 from "fever" (principally enteric), 68 from whooping-cough, 49 from scarlet fever, 21 from diphtheria, and 10 from small-

pox. These diseases caused the lowest death-rates in Huddersfield and Bristol, and the highest in Norwich and Wolverhampton. The highest rates of mortality from diarrhœa were recorded in Leicester, Norwich, and Wolverhampton; from measles in Wolverhampton and Blackburn; from whooping-cough in Sunderland and Derby; and from scarlet fever in Wolverhampton and Sheffield. Of the 21 deaths from diphtheria in the twenty-eight towns, as many as 19 were recorded in London. Small-pox caused 9 deaths in London (exclusive of 3 metropolitan cases registered outside Registration London), and 1 in Sheffield. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which in the five previous weeks had declined from 1368 to 810, further fell to 640 on Saturday last; the cases admitted were 64, against 66 and 110 in the two preceding weeks. The Highgate Small-pox Hospital contained 37 patients on Saturday last, 6 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which in the two previous weeks had been 198 and 187, further declined to 162, and were 14 below the corrected average. The causes of 92, or 2·3 per cent., of the 4052 deaths last week in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Sunderland, Norwich, Derby, and Cardiff. The largest proportions of uncertified deaths were recorded in Blackburn, Oldham, and Hudderfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·6 and 20·7 in the two preceding weeks, was again 20·7 in the week ending the 16th inst.; it was 3·4 below the average rate during the same period in twenty-eight of the largest English towns. The rates in the Scotch towns last week ranged from 13·4 and 13·6 in Paisley and Greenock, to 23·5 in Perth, and 25·9 in Glasgow. The 499 deaths in the eight towns included 51 which resulted from diarrhœal diseases, 29 from whooping-cough, 9 from scarlet fever, 9 from measles, 6 from "fever," 5 from diphtheria, and not one from small-pox; in all, 109 deaths were referred to these principal zymotic diseases, against 85, 95, and 114 in the three preceding weeks. These 109 deaths were equal to an annual rate of 4·5 per 1000, which was 2·1 below the mean rate from the same diseases last week in the twenty-eight English towns. The deaths from diarrhœal diseases, which had been 40 and 51 in the two previous weeks, were again 51 last week, and exceeded by 8 the number in the corresponding week of last year; 27 were returned in Glasgow and 7 in Edinburgh. The rate of mortality from diarrhœa in the Scotch towns did not exceed 2·1 per 1000, while it averaged 4·7 in the large English towns. The 29 fatal cases of whooping-cough were within 2 of the number in the preceding week, and included 20 in Glasgow and 4 in Edinburgh. All the 9 deaths from scarlet fever were recorded in Glasgow, where 6 of the 9 fatal cases of measles were also returned. The deaths from "fever" showed a further increase upon recent weekly numbers, while those from diphtheria showed a decline of 2 from the number in the preceding week. The deaths referred to acute diseases of the respiratory organs in the eight Scotch towns were 64, against 66 and 65 in the two previous weeks, and were 8 below the number returned in the corresponding week of last year. The causes of 77, or more than 15 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 23·0 and 22·4 per 1000 in the two preceding weeks, rose to 24·2 in the week ending the 16th inst. During the first seven weeks of the current quarter the death-rate in the city averaged 22·0 per 1000, the rate during the same period being equal to 23·0 in London and 17·0 in Edinburgh. The 163 deaths in Dublin last week exceeded by 12 the number in the previous week, and included 33 which resulted from the principal zymotic diseases, against 16, 22, and 23 in the three preceding weeks; of these, 22 were referred to diarrhœal diseases, 6 to scarlet fever, 4 to "fever" (typhus, enteric, or simple), 1 to whooping-cough, and not one either to small-pox, measles, or diphtheria. These 33 deaths were equal to an annual rate of 4·9 per 1000, the rate from the same diseases being 5·1 in London and 2·7 in Edinburgh. The deaths referred to diarrhœa, which had been 11 and 8 in the two previous weeks, rose to 22 last week. The fatal cases of scarlet fever corresponded with the number in the preceding week, while those of "fever" and diphtheria showed a decline. The deaths of infants considerably exceeded the number in the previous week, while those of elderly persons were below the average of recent weeks. The causes of 30, or more than 18 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

Surgeon-Major E. C. Markey, medical officer in charge of the Cambridge Hospital, Aldershot, is held in readiness for immediate embarkation for Egypt. Brigade-Surgeon E. G. McDowell, C.B., has been ordered to Aldershot to assume charge of the Cambridge Hospital.

ADMIRALTY.—Fleet Surgeon Robert Nelson has been appointed to the *Achilles*.

ARTILLERY VOLUNTEERS.—The Tynemouth: Acting Surgeon William Pope Mears, M.D., from the 1st Northumberland and Sunderland Artillery Volunteer Corps, to be Acting Surgeon.

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the Buffs (East Kent Regiment): Surgeon Charles Holttum is granted the honorary rank of Surgeon-Major.

Correspondence.

"Audi alteram partem."

THE DEMONSTRATION OF THE BACILLUS LEPRÆ.

To the Editor of THE LANCET.

SIR,—The discovery of bacillus lepræ, though made some years before that of bacillus tuberculosis, has not been put to the same very practical use in diagnosis that immediately followed the discovery of the latter bacterium. The reason for this lies in the comparative difficulty hitherto attending the demonstration of the parasite of leprosy. To show it, it has been necessary to excise a portion of affected tissue—an operation naturally objected to even by a leper; and afterwards the tedious processes of hardening and section-cutting have to be gone through prior to the final staining, washing, and mounting; and even then, when the preparation, the result of so much labour, is under the microscope, it sometimes, especially to the untrained eye, may require a considerable exercise of faith to recognise in the patches and ill-defined streaks of colour the bacillus. I have shown such specimens to friends, and at times their smiles were more indicative of incredulity than conviction.

By a method I now adopt, the bacillus can be demonstrated as easily, rapidly, and perfectly as can that of tubercle, and the preparations are so clear that on examining them the most thorough sceptic is immediately converted to a belief in the bacillus lepræ. I proceed as follows:—A leper tubercle or infiltrated patch is selected and the whole or part of it included in the jaws of an ordinary thin-bladed pile clamp. The tightening of the clamp has the effect of driving out all the blood from the included tissues, and the tubercle, from being dirty red or purple, becomes like yellow wax. The hold of the clamp is maintained at a degree of tightness sufficient to keep up this state of anæmia, and at the same time the centre of the included mass is pricked with a needle or sharp knife. From the puncture a droplet of perfectly clear fluid exudes, and is to be transferred to one or more cover-glasses, each cover-glass being smeared with rather a thick layer of the leper juice. The cover-glasses are then dried, stained, washed, and mounted in the ordinary way. The Weigert Ehrlich method I have found give good results. Under the microscope slides so prepared show bacilli in prodigious numbers, both free and in dense bundles packing the leper cells. The diagnosis of leprosy from the juice of

the leper tubercle is in this way made as easy, expeditious, and reliable as is that of tubercular phthisis from sputum.

Trusting that this hint may be of service to those interested in leprosy and its bacillus,

I am, Sir, yours truly,

Hong-Kong, China, July 9th, 1884. PATRICK MANSON.

THE CASE OF JOSEPH JAMES DONNELLY.

To the Editor of THE LANCET.

SIR,—Dr. Hughes Bennett finishes a very instructive letter in this day's LANCET upon the case of Joseph James Donnelly by asking a question, which I am very glad to be able to answer if you will grant me space in your columns for the purpose.

Dr. Bennett writes:—"The public have a right to be informed whether this individual is for the future to be considered as a lunatic, and consequently as an innocent man, or whether he is to undergo penal servitude for life as a malefactor." Dr. Bennett will, I am sure, be glad to learn that Donnelly was admitted into the epileptic ward of this asylum on Monday, the 4th inst., where, if Dr. Bennett should ever be in this neighbourhood and should have half an hour to spare, he may, if so inclined, renew his acquaintance with his quondam patient, and at the same time afford me the pleasure of showing him the general arrangements of the asylum.

It is very justly pointed out by Dr. Bennett that, Donnelly being what in his letter to you he describes him to be, two things of a nature to be regretted have happened in his case. The first is, that he was permitted to have the opportunity of killing his sister; and the second is, that he was afterwards tried and sentenced as if he had been a responsible malefactor. Now, although no one would, I think, have the hardihood to hazard the assertion that our statutes relating to lunatics are perfect, or that the resources of civilisation have been exhausted with respect to our modes of procedure in the treatment of these unfortunate persons, still we are, happily, not compelled to own that there is absolutely nothing that could be done, in a similar case in the future, to avert the occurrence of similar unfortunate incidents.

With respect to the means for the possible prevention of the recurrence of similar acts of homicidal violence, I would ask your permission to point out that any medical gentleman who possessed information similar to that which Dr. Bennett possessed as to his patient, at the time of discharging him from hospital, would be taking a legal and justifiable course if he were to address a letter to the relieving officer of the parish to which the patient belonged, stating the circumstances, together with his opinion of the patient's mental condition. Upon the receipt of such a letter every relieving officer of a parish is bound by statute (16 and 17 Vict., chap. 97, sect. 68) to make inquiry into the case.

With respect to the second point, the suggestion that I would venture to make is, that if any medical gentleman should ever be in possession of any facts relating to the mental condition of any person committed for trial upon a charge of murder, and should be in any doubt or difficulty as to the right course to take in the matter, he may, if so disposed, address a letter to me stating the facts, and I will, very gladly, charge myself with the duty of taking steps for bringing before the court and the jury such facts as may reach me in this way. The only stipulations I would make are, that the information should reach me sufficiently long before the trial, and that the facts should either be within the personal cognizance of the writer or be capable of proof by witnesses.

With the view of disarming criticism beforehand, will you permit me to add that I do not offer these suggestions as if I thought that they contained the whole duty of man in the matter, but that I offer them only as possible aids to those in doubt. I am, Sir, your obedient servant,

W. ORANGE.

Broadmoor Criminal Lunatic Asylum, Aug. 16th, 1884.

To the Editor of THE LANCET.

SIR,—As you do me the honour to refer to a letter of mine in your leading article of the 9th inst. on the above case, I trust you will allow me to state, in as few words as possible, why I find myself unable to agree with some of the remarks in that article.

First of all, you seem to doubt the propriety of interfering to prevent the execution of the capital sentence when once it has been pronounced; you "think that matters of this sort should be dealt with finally at the time of trial, or rather before it," and although you allow Donnelly's to be one of the exceptional instances which call for inquiry, you state in general terms that you do not "think it expedient, in the interests of public safety, that there should be this last chance of escape open to criminals." My answer is that cases occur not unfrequently in which, from the poverty of the accused and the peculiarities in our English methods of judicial procedure, the arguments in support of the plea of insanity are imperfectly brought out during the trial. Take, for example, this very case. Donnelly's friends were too poor to provide him with any sort of legal assistance, so that had not a member of the Bar kindly undertaken the defence at the request of the presiding judge, the poor fellow would have been left without anyone to plead his cause. As it was, his counsel entered upon his task under every conceivable disadvantage; no defence had been prepared, no witnesses had been summoned on the prisoner's behalf; and as the prosecution did not happen to produce the one witness, Dr. Dreschfeld, whose evidence was likely to tell in the man's favour, it was impossible to elicit, in cross-examination, the facts which were necessary in order to sustain the plea. It is perfectly evident, therefore, that the trial could not, in the nature of things, be a satisfactory one; and to my mind it would be horrible if a decision, arrived at under such circumstances, should be held to be irreversible.

If it be asked why means were not taken to interfere in the matter before or during the trial, I reply that interference by persons not directly concerned in a case that is *sub judice* is generally supposed not only to be impolitic but absolutely reprehensible. It seems to me that I adopted the only course open to me; I abstained from interference until the trial was over, and until there was imminent danger of a deplorable miscarriage of justice. That the case was one that needed revision is proved by the fact (of which, of course, I was not aware when I wrote to the local papers) that the Government had already sent two medical inspectors to report on the case, and that in consequence of their report the man has been reprieved during Her Majesty's pleasure.

But there is a still more important point in your leading article on which I am compelled to differ from you. You compare the condition of an epileptic maniac with that of a patient rendered irascible and peevish from an attack of gout, or from phthisis in a certain stage, or from the approach of certain changes in the sexual life. In my opinion the two conditions are incomparable. In the case of an epileptic maniac, his acts of violence are done unconsciously, and therefore are uncontrollable; in all the other cases mentioned, acts of a similar nature would always be done consciously, and would simply be the result of uncontrolled temper. Epileptics like Donnelly have no control over their actions during the maniacal paroxysm, and no recollection of them when it is over. They are therefore legally and morally irresponsible, and no effort can be too great to prevent their being systematically treated as criminals.

I remain, Sir, yours very truly,

CHARLES J. CULLINGWORTH, M.D., M.R.C.P.,
Lecturer on Medical Jurisprudence at the Owens
August 13th, 1884. College, Manchester.

P.S.—As my letter happened to be too late for insertion last week, may I be allowed to add a postscript, expressive of the pleasure with which I read Dr. A. Hughes Bennett's letter in THE LANCET of last Saturday? I entirely concur in the sentiment to which he has given such forcible expression. With regard, however, to the mismanagement of the prisoner's defence, the above letter will show that our system of preparing cases for trial is more to be blamed for the extreme unsatisfactoriness of this inquiry, than the very able advocate who kindly undertook the defence at the last moment, without having received any instructions, and who was consequently at an enormous disadvantage throughout the case.

THE CHOLERA IN FRANCE.

To the Editor of THE LANCET.

SIR,—Before leaving for Paris, I send you a line to say that on visiting the hospitals, both of Toulon and this place, I was agreeably surprised to find all the patients either con-

valescent or in the stage of consecutive fever in which the intra-peritoneal injections were not called for. No admissions in the algide stages of this disease presented themselves whilst I was there. For some time, however, these injections into the peritoneum have been exercising the minds of practitioners here, through quotations from THE LANCET having found their way into the foreign press; and since Dr. B. W. Richardson's first essay in 1854 many authors appear to have written on the subject. The chief difficulty seems to have been the want of directions for the employment of the method. In tapping for dropsy, the volume of ascitic fluid would protect the intestines; but in injecting the peritoneum for other diseases, it would seem necessary, as Dr. Richardson has done, to make a small lancet incision and scratch down to the peritoneum, and then push in a blunt cannula. Such a cannula, blunt at the end, with an eyelet like a catheter at one side, I have left with Dr. Duranty, one of the chief physicians of the cholera hospital established at the Palace of "Pharo," at the entrance of the harbour here; and Dr. Bassano, one of the house-surgeons, and the Doctor himself, have promised to give me careful details of any cases which they may be able to treat by intra-peritoneal injections. All seem anxious to try them, intra-venous injections neither having succeeded in this epidemic, nor being, unless with exceptional apparatus, unattended with risk. The almost sudden influx of fluid by the veins seems to be unfavourable. I also strongly recommended the injection of the subcutaneous cellular tissues with warm water, so as to produce artificial anasarca, for both cases of dropsy and anasarca have been known to recover when attacked by cholera, apparently through the absorption of their effusions. To Dr. B. W. Richardson, it appears, we are indebted for this method, though others may have thought of it independently. Drs. Coney and Purves have recommended vesical injections, but Dr. Richardson, who tried this long ago, did not find the absorption to be satisfactory. Besides, so dangerous is the reabsorption of urine, that the catheter has often to be employed.

The epidemic seems to be passing away. The deaths registered are chiefly of cases admitted long ago in the stage of secondary fever. The admissions seem now to be few.

Dr. Koch has recommended, I hear, the non-watering of the streets, as he believes desiccation kills the "microbia."(?)

All the medical officers, sisters, and attendants, including ladies of rank, the British consultate, chaplains, &c., display the utmost courage and devotion.

I am, Sir, yours truly,

CAMERON MACDOWALL, F.R.C.S. Edin.,
Marseilles, August 1st. Brigade Surgeon, Bombay Army.

P.S.—To show you how extremely difficult it is to introduce any new treatment of disease, I send you a copy of the following telegraphic answer (the original telegram I have had to send to the India Office) to my inquiry—if, since I left Toulon and Marseilles, it has been possible to make any trial of "intra-peritoneal injections" with the apparatus which I left there? The answer was as I expected from what I saw at the hospitals, where no cases in the algide stage were admitted during my stay. It was to this effect: "Not yet. Waiting for favourable case." This I received on Friday from the interne or house-surgeon, Dr. Bassano. I drank Toulon and Marseilles water, and may say that I suffered from diarrhœa before going there. This diarrhœa increased so much at Marseilles that I was obliged to take one-drachm doses of bismuth in mucilage before it yielded on the third day. Like ipecacuanha in acute dysentery, small doses are useless. After burning most of my clothing, I endured a good ten days' quarantine in the north of France before coming to England. In conclusion, I may be permitted to say that this epidemic, which has been monstrously exaggerated in public opinion, is comparatively mild. The statistics of the Pharo Hospital at Marseilles show that considerably more than half the cases recovered. If imported by the transport *Sarthe*, it would appear that the forty days' sea voyage may have attenuated considerably the virus, or else, as I have thought ever since I saw cases in Liverpool, the epidemic coming by sea is less formidable when it arrives than when travelling by land *vid* Russia &c. To those who blame the sanitary state of Toulon and Marseilles, I would point out the very extraordinary difficulties of draining the places into the tideless Mediterranean. The upper town is built almost entirely on rock, the lower on piles, and water is found at a few feet. Closed cesspools are excavated under the new houses, which are periodically emptied in the night by steam power; for it must be remembered that even in Paris, and according to very generally approved ideas, no sullage from waterclosets is allowed to enter the drains, which carry into the River Seine only kitchen and surface waters. In the lower town such cesspools or "fosses" are impracticable, and receptacles are carried down at night into each street to be taken away and brought back empty. I believe a system of covered surface drains has been spoken of; but then, as in Marseilles, the docks will become foul, as there is no tide, unless the drains be carried far out to sea. There would be no deficiency of water, for clean streams run down the gutters of almost every street. It is turned on periodically.

OUTBREAK OF CHOLERAIC DIARRHŒA AT CLAYTON-LE-MOORS.

To the Editor of THE LANCET.

SIR,—On Saturday, Sunday, and Monday, the 2nd, 3rd, and 4th inst., between 100 and 150 persons of all ages were taken ill in the above township with vomiting and purging, and at the same time almost as many were attacked in the adjoining parish of Rishton. Having treated eighty-five of these cases myself during the past week, it may be interesting to your readers to report concerning the causes and symptoms of the outbreak, the treatment adopted, its infectious or non-infectious nature, and the conclusions at which I have arrived generally.

In all cases except two I traced potted meat from one pork butcher. It was made from beef, pork, and pig's head, and those who had partaken largely were affected most.

The symptoms were the same in all, with varying degrees of intensity. They were vomiting and purging, pains in the stomach, and, in the worst cases, collapse after a few hours. The vomited matters were first those of the contents of the stomach partially digested, but afterwards of a yellowish or bile-stained watery fluid; whilst the dejecta varied from a brownish to a yellow fluid, and in [some cases green, with very foul odour. The tongue was moist, and covered with a white or brownish-white fur, but red at the edges and tip. There were feverish symptoms in the mild cases, but reduction of temperature and coldness of the extremities in the worst.

As regards treatment. In the case of all the adults I prescribed six draughts of an effervescing mixture with half a drachm of a 1-in-20 solution of carbolic acid, fifteen minims of the solution of morphia, and twenty minims of the aromatic spirit of ammonia; one to be given every two hours. In the majority of cases this mixture answered well, but in some of the worst it did not stop either the vomiting or the purging, and it seemed to have a tendency to increase the collapse, no doubt fron the depressing action of the morphia upon the respiratory and circulatory centres. In the mild cases sleep was induced with one or two doses, but in the worst the morphia was not retained in sufficient quantity in this form to act as a soporific. In some cases morphia in pill of the strength of one-sixth of a grain answered well in checking the vomiting and inducing sleep, but not in others. In addition to medicine I also ordered brandy and soda-water and milk and soda-water to quench the great thirst which all complained of, and a hot linseed and mustard poultice over the whole of the abdomen. When the above-mentioned effervescing mixture failed, I gave five to ten grains of bismuth, half a drachm of solution of carbolic acid, five to eight grains of hydrate of chloral, five to eight minims of tincture of belladonna, half a drachm to a drachm of glycerine, and water to one ounce, every two, three or four hours, with excellent effect. Many rejected and vomited the soda-water and milk, but all could take and retain water, and particularly port wine and water, better than any other fluid. In cases where there was no vomiting, but only diarrhœa and pain, with feverish symptoms and foul tongue, the following mixture cured in a few hours: three drachms of compound spirit of ammonia, half an ounce or six drachms of solution of carbolic acid (1 in 20), a drachm to a drachm and a half of chloral hydrate, a drachm to a drachm and a half of tincture of belladonna, six drachms of syrup of red poppy, to six ounces of water, half an ounce to be taken every second or third hour. With this mixture also I treated most of the young children

affected; of course in reduced doses, and with bismuth in place of ammonia in cases of severe vomiting. I found that suppositories of belladonna and lead acetate greatly relieved the straining at stool when the diarrhœa was abating. Of the stimulants used, I found port wine to agree the best. I believe that in carbolic acid, bismuth, chloral, and belladonna we have an excellent remedy for cases of this kind. I would never in any case give more than half or three-quarters of a grain of morphia either in pill or solution, and am now determined to give the most decided preference to chloral and belladonna, and to discard morphia altogether in the treatment of those severe cases where there is great depression and a tendency to collapse. If carbolic acid, bismuth, chloral, and belladonna prove more efficacious in relieving the vomiting than morphia—as in the worst cases in my hands they certainly did—I think they should rather be used; moreover, there is not the same danger attending the use of them in a system weakened by large losses of fluid as there is in this disease. Again, chloral, whether or not by transformation or chemical change in the blood, has proved of acknowledged efficacy in relaxing muscular spasm anywhere—as, for instance, in convulsions; and hence, I think, its good effects in vomiting and diarrhœa, by exerting a sedative effect upon the diaphragm and the muscular coat of the intestines, and this without much depression of the vascular system. Not so with morphia, in its temporary or evanescent stimulant, and very much more marked depressant, action upon the vascular and respiratory centres. Many of the alleged symptoms of stimulation by morphia I believe to be due to passive congestion of the cerebrum from depression of the circulation, not stimulation. Any depression of the circulation which may result from chloral in the above mixtures is amply compensated for by the belladonna they contain. In some cases of diarrhœa only, the ordinary sulphuric acid and opium mixture, with carbolic acid, answered well, but not so well as ammonia and opium with the same, the reason being, I think, that ammonia, besides being a powerful stimulant, supports the circulation when weakened by losses, by preventing coagulation, whilst acids favour it and have no stimulant properties. I had opportunities of observing the greater and more rapid improvement with carbolic acid than without it in the above mixtures, and am of opinion that it should form a constant ingredient in all diarrhœa mixtures. Of the eighty-five cases, two died collapsed—one, a young collier of twenty-six years, and the other a debilitated man of fifty-one. In both I injected ether subcutaneously to the amount of a drachm or so, but with little or no effect.

Of the infectious nature of the complaint there is but slight evidence in one case, that of a little boy who was continually in the room where one of the worst cases was being nursed, and followed the nurse when the dejecta were being removed. He was taken ill with symptoms similar to those of the others, but with three or four doses of the bismuth, carbolic acid, chloral and belladonna mixture, he was well in twelve hours. All the cases under treatment recovered. Unfortunately none of the meat or stew was examined, as when the cause had been determined all had either been eaten or otherwise disposed of. It seems unreasonable to believe that in two days meat should so far decompose as to cause such terrible sickness, and I am afraid the actual cause must remain a mystery.

A propos of the subject of diarrhœa and choleraic diarrhœa, with the allied one of cholera itself, it occurs to me to speak of Koch's cholera bacillus. It is, I think, quite within the bounds of probability that the bacilli will yet be found in the intestines of patients who have died of diseases other than cholera which have a debilitating action upon the lining membrane of the bowels; and I am of Dr. Roche's opinion that any amount of the bacilli may be swallowed without any evil consequences arising, provided they are well washed.

Finally, I should like to state that, in my opinion, all cases of the nature of those described in this outbreak which present symptoms of a mild character with no depression of vital power should be treated with morphia and carbolic acid combined with ammonia; but that those which present symptoms of collapse should be treated with chloral and belladonna combined with bismuth and carbolic acid; whilst the treatment with ammonia, chloral, and belladonna with carbolic acid should be reserved for those very mild cases which are characterised by diarrhœa with feverish symptoms and nausea, but no vomiting.—I am, Sir, yours truly,

C. R. ILLINGWORTH, M.D. Ed.

Clayton-le-Moors, Aug. 12th, 1884.

CHOLERA: ITS ETIOLOGY AND TREATMENT.

To the Editor of THE LANCET.

SIR,—The cholera is making sad havoc in France, and may any day break out in this country. There are many young medical men who will be perplexed as to its treatment. In 1848 and 1849 many different modes of treatment were tried; and, notwithstanding all the researches that have been made since, there is no fixed plan of treatment adopted by the profession. Many eminent medical men have placed their valuable lives in danger, and worked hard to find a remedy, but the only means known of preventing the disease and checking it are those adopted by Sir William Hunter and his staff in Egypt—isolation and cleanliness, pure air, good water, and especially early medical attendance and good nursing. We have been taught by sad experience that impure water and filth favour all epidemic, endemic, and contagious diseases, and increase their virulence. During the epidemic of 1849 I was requested to take charge of those suffering from cholera and diarrhœa in the townships of Westhoughton, Over Hulton, and Lostock. These townships were very free from stagnant and filthy water, and although I was kept busy night and day for six weeks I had only two deaths from cholera, whereas in the adjoining township of Hindley the water-supply was very deficient, and a brook which received the sewage from houses on both sides passed through the village. The disease in this village was very virulent, and many deaths took place; isolated cases occurred near this spot. A committee sat here day and night to supply blankets, food, and other necessaries. Five medical men were stationed in the village. Isolated cases of death took place in the immediate neighbourhood of the village; other cases were treated successfully in the more healthy parts of the township, where pure air, good water, and proper attention could be had. I found the most favourable symptom was the return of bile in the motions, and I adopted with success the calomel and opium treatment in doses of two grains to one grain or two grains to half a grain for an adult, together with a saline mixture, properly prepared sago gruel and brandy, toast water, coffee or cocoa, or milk-and-water, in equal parts, boiled and allowed to cool. Hygiene is too much neglected. The food and drink are quite as important, and require as much attention, as the medicine, as is also the immediate removal of all discharges. I believe I was instrumental in saving many lives by advice as to preparing and administering food and drink. I am convinced that good nursing is quite as necessary in cholera as medicine. I have seen patients almost pulseless for hours, the legs and arms cold and blue with violent cramp, who, after many hours' rubbing with warm flannels and the administration of gruel and brandy in small quantities, have recovered; some are now living who were in that state in 1849. "Sed tunc quoque unicum in frictione præsidium est; quæ si calorem in cutem evocavit, potest alicui medicinæ locum facere" (Celsus). It has been stated that many of the deaths which take place at Toulon are from the subsequent fever. No doubt some of those cases are attributable to giving opium without the calomel, thus checking the natural secretions from the liver. The acid treatment recommended by the College of Physicians of Dublin was used in many cases in 1849 by some of my colleagues, but was abandoned, and the treatment I adopted resorted to with greater success. Celsus said, "Si post suppressam choleram febricula manet, alvum duci necessarium est; tum cibis vinoque utendum est." Dr. Koch deserves our best thanks for the exertion he has made to discover the cholera germ; but, after all, the only remedies against its spread are cleanliness and temperance, and the clean and healthy state of a country or district or house is the greatest safeguard, the most economical, and the best remedy against cholera.

I am, Sir, yours truly,

Bolton, July 22nd, 1884. JOHNSON MARTIN.

"PHYSIOLOGY OF THE FEET."

To the Editor of THE LANCET.

SIR,—Mr. Allen's regret for representing an opinion of mine on what *should be* as a statement of that which *is*, has not prevented him from pointing out objections to "letting the heel down gradually from the toe," while the words used in my paper were that the foot should reach the ground

when nearly flat; just as the caution in the acceptance of a theory which he feels called on to inculcate does not deter him from asserting as a fact that "our distant ancestors walked on all-fours." I took great pains to justify my opinion that, in walking, the toes should first touch the ground. Mr. Allen's letter may pass for a reply to arguments used in mine. As, however, the point involved has an important bearing on the question what proper walking is, it may be added that Professor Michael Foster, as I have since found, holds the same opinion, and that he has paid special attention to the point is shown by his qualifying a statement in the text, that the toe *does* first touch the ground, by a foot-note saying that this is rather as it *should* do. Very recently an intelligent engineer told me that the barefooted natives with whom he had been engaged in making a railway in Brazil put the front of the foot down first, and hardly touched the ground at all with the heel. These men, he said, were of Portuguese descent, and had exceedingly good feet. Moreover, it is difficult to imagine how Red Indians can walk with their toes turned inwards (whose walking Sir John Burgoyne said should be the model for our soldiers' march) if the heel be directed downwards. So much for Nature. I hear on good authority that high-class teachers of calisthenics in ladies' schools have long taught that in walking the toes should first touch the ground.

I am, Sir, yours truly,

Gloucester, August 18th, 1884. T. S. ELLIS.

*** Here the controversy must close.—ED. L.

"BOGUS AMERICAN DEGREES."

To the Editor of THE LANCET.

SIR,—I notice in your issue of August 16th an extract from *The Times* about the bogus M.D. of the University of Philadelphia. In this district and in the North of England generally, where collieries and ironworks exist, there the impostors of Philadelphia plant themselves, and are a curse to the unfortunate working class, whom they dupe.

I send you the original letter I received from the British consul at Philadelphia. Will you endeavour to bring it under the notice of the medical men in Parliament? Something ought to be done to stop this quackery.

I am, Sir, yours truly,

JOHN C. O'HANLON.

Tudhoe Grange, Spennymoor, Durham, Aug. 16th, 1884.

"British Consulate, Philadelphia, July 26th, 1884.

"SIR,—With reference to your letter of the 25th ult., I have to inform you that the University of Philadelphia is no longer in existence, its charter having been cancelled by the Government of Pennsylvania after a disgraceful existence of many years. Diplomas purporting to issue from such an institution are bogus and a fraud upon the community.

"Your obedient servant,

"ROBERT CHARLES CLIPPERTON,

"John C. O'Hanlan, Esq., M.D., Her Majesty's Consul.
Tudhoe Grange, Spennymoor, Durham."

RUPTURE OF THE COVERINGS OF AN INGUINAL HERNIA.

To the Editor of THE LANCET.

SIR,—I read with much interest in your last number the report of the case of rupture of the coverings of an inguinal hernia through the cicatrix of an old operation wound. In a similar case which I brought before the Medical Society last year, and which was reported at length in THE LANCET, the rupture occurred not through the cicatrix of the old operation wound, but through the sound skin, where it joined the cicatrix, and I should imagine this to be the most likely place for such a rupture to occur. I trust that in Mr. Keetley's case the statement made by the man of his treatment before reaching the hospital is not quite correct—viz., that "he walked a quarter of a mile to see a surgeon, who wrapped a piece of lint round the part, and ordered him to go off to a hospital at once; on leaving the surgery he walked back to the place where he left his waggon, and then took a cab to the hospital." Surely, no human being, still less a surgeon, would leave a man under such circumstances to shift for himself.

I am, Sir, yours truly,

Harley-street, Aug. 19th, 1884. BERNARD PITTS.

BIRMINGHAM.

(From our own Correspondent.)

CHOLERA SCARES.

CONSIDERABLE excitement was created in Birmingham on Tuesday by the prominence given by the press to the report that a death had occurred from Asiatic cholera. Careful inquiry, however, leads to the belief that an error has been committed in supposing this to be the case. The patient was a man aged forty-seven, living in a densely populated part of the town; the seizure took place about midnight on the preceding Friday, the man having gone to bed in apparently good health. The next day he was able to be downstairs and about the house, but became worse in the evening from diarrhœa, stomachic pains, and cramp in various parts of the body. He was better again on the Monday, but on a return of the symptoms died from collapse at six o'clock in the evening, after an illness of fifty-six hours. An official examination, under the direction of the medical officer of health, has shown the case to have been one of severe diarrhœa and collapse. The prevalence of diarrhœa in the town at the present time is very great. From the 10th to the 17th inst. 800 cases were treated at the General Hospital, and in one week at the Owens Hospital 490. In this instance the certificate of the medical man in attendance was filled up as "cholera" and "collapse." In the present state of public excitement on the question, it is incumbent upon medical practitioners to promote the confidence of the public, rather than to add to the apprehension which so many people have of this dread scourge. Judicious dealing with certificates of death, and careful comparison of known facts relative to the two diseases, will generally serve to distinguish between the true form of cholera and the more common cases of acute diarrhœa with collapse and cramps which occur in such frequency at this season of the year in all large towns. In the present case much needless alarm has been caused, which it is to be hoped will be assuaged by the prudent and clear letter which the Mayor has written to the public papers on the question.

IRREGULARITY IN DEATH CERTIFICATES.

A case of much public importance was heard at the Birmingham Police-court on the 15th inst., upon a summons taken out by the Superintendent Registrar against a Mr. Williamson, a local medical practitioner, for giving a medical certificate of the cause of death of a child he had not seen or attended during illness. From the evidence it was shown that the child was attended by an unqualified assistant of the defendant's, the latter signing the certificate after the death of the child. Some contradictory evidence was given as to the genuineness of the certificate, but the magistrates considered the case proved, and imposed a mitigated penalty of £5 and costs or twenty-eight days imprisonment. It cannot be too widely known that such offences are punishable in a greater degree than this, for if proceeded against by indictment, a conviction renders the offender liable to two years' imprisonment with hard labour, or seven years' penal servitude. Irregularities of this kind open the door to serious abuses of many kinds, and it is to the interest of the profession, as well as to the security of the public, that they should be protected from frauds of a similar character to this.

IRELAND.

(From our own Correspondent.)

ROYAL COMMISSION ON IRISH PRISONS.

THE Commissioners appointed to inquire into the administration, discipline, and condition of prisons in Ireland, both local and convict, report that they have inspected carefully the convict prisons, the majority of the local prisons, and some bridewells. At these visits an examination was made as regards the general structure of the buildings, the wards, cells, stores, and hospitals; also, the sanitary and culinary arrangements, the provision for the supply of water, and that for exercise and labour. Many of the

prisons were devised for an obsolete system of discipline, and therefore fall short of the requirements of the present day; only five may be regarded as coming up to the standard of modern construction; while of the remainder, twenty-two have been more or less improved, and eleven are unsatisfactory as regards construction. Before the passing of the General Prisons (Ireland) Act, 1877, the administration of the Irish Convict Prisons was entirely separated from that of the county and borough gaols and bridewells. The former were administered by directors appointed by the Lord-Lieutenant; while, on the other hand, the county and borough gaols and bridewells were under the direct management of local boards of superintendence. The General Prisons (Ireland) Act, 1877, transferred to a General Prisons Board all the county and borough gaols and bridewells, together with all the powers and duties of the local boards of superintendence. The Commissioners report that, from inquiries made, they do not believe that the Irish local prison system is administered with any intentional or systematic harshness towards the inmates. Where an excessive number of punishments appear to have been inflicted, they were cases of refractory prisoners whose mental condition may be described as the borderland between sanity and insanity, and where the application of penal discipline is confessedly difficult. They, however, are not satisfied that the discipline in all the local prisons is as regular and efficient as it ought to be, or that the means exist in them for effectively promoting the reformation of criminals; and are convinced that the fact of there being a large number of local prisons in Ireland, and consequently a small number of persons in most of them, lies at the root of the principal defects of the existing administration. No argument is needed to show that a superfluity of diminutive establishments must be as conducive to waste in expenditure as it is prejudicial to uniformity and excellence of administration, and therefore the Commissioners are unanimous in opinion as to the superiority of large over small prisons, and suggest that the prisons should be so consolidated as to ensure, if possible, that the daily average population should in no case be less than one hundred.

THE DUBLIN TRIALS.

Before Baron Dowse, on Tuesday last, at the Court-house, Green-street, Dublin, James Ellis French was arraigned for a felony committed in May, 1883, and a jury was empanelled to try whether the prisoner was in a fit condition to plead guilty or not. Dr. Gordon, surgeon to the Constabulary, Dr. Eames, resident medical superintendent to the Cork District Lunatic Asylum, Dr. Curtis, a well known surgeon of Cork, Mr. Wheeler of Dublin, and others, gave evidence to the effect that Mr. French was not in a mental condition to plead to the indictment and conduct his own defence with due caution. On the other hand, Drs. Banks and Cruise, with Mr. McDonnell, were equally unanimous that he was shamming and in the possession of his faculties. There was no result when the electric battery was applied to the lower extremities; he had also a dragging in one of his legs, hesitation in his speech, occasional difficulty of deglutition, alleged loss of memory, &c. From the symptoms it was evident to Baron Dowse that Mr. French was suffering from some kind of paralysis, but from Mr. McDonnell's evidence it would appear that he considered there was nothing the matter with him mentally or physically, and that he would pass him for an insurance company, even if he were the doctor for that company; but his lordship added that he had a suspicion that if he did so, it would be the last man that he would ever pass for that company. In a conflict of medical evidence such as this the jury very naturally disagreed. It is possible that Mr. French may be suffering from locomotor ataxy, accompanied by nervous debility, but the case no doubt is an exceedingly complex and difficult one. The only specialist examined in the case was Dr. Eames of Cork, who was of opinion that the prisoner was not capable of pleading.

FROM reports of the condition of the Bishop of Llandaff, who a few evenings ago ruptured a bloodvessel in his side, we learn that his lordship is making favourable progress towards recovery. He has been visited by his medical attendant, Dr. Vachell, who found his lordship's strength so far improved as to permit him to leave his bed for a short time.

PARIS.

(From our Paris Correspondent.)

FRENCH HEALTH-RESORTS.

I HAVE just returned from a rambling tour of about four weeks in the South of France, and I desire to send you a few general observations on some of the health-resorts I have visited *en route;* but your remarks anent the "health resorts at home," which lately appeared in THE LANCET, are so forcibly true that they have had a deterring effect on my mind, and I had almost given up the idea of troubling you, as what I have to say is simply corroborative of all you stated respecting the relative merits of the home and continental health-resorts.

France is certainly the most favoured country in the world as regards the number and variety of its natural mineral waters, but the conclusion I have come to from what I have personally witnessed is that the therapeutic value of these waters has been greatly exaggerated. Change of climate, change of scene, and change in the mode of living are doubtless important elements in the cure of chronic cases, which are at all curable, that are sent to the different watering-places. Those in France are the more generally resorted to from all parts of the world, as the French have the innate faculty of combining the agreeable with the useful, and they spare no expense or pains to render their health-resorts more attractive than is possible in any part of the United Kingdom. "Variety is charming," and there is no doubt that this is the great secret of the beneficial results obtained by travelling on the Continent or elsewhere away from home. Moreover, those who can afford the time and money will continue their excursions, in spite of all that may be said or written against their doing so, because it is fashionable for people to go away for a change at certain seasons of the year. For my part, excepting the notoriously insanitary condition of the dwellings, I was most favourably impressed with the general aspect of the country, and would willingly concede to it the epithet of "La belle France" given to it by its own inhabitants. After a few short excursions in the Basses Alpes I made my way to Aix-les-Bains, where I met with the most cordial reception among the medical staff, who, I was told, practised there in the most perfect harmony—a compliment that cannot be unreservedly paid to the profession in many other places in or out of France. Aix-les-Bains is certainly one of the most important thermal stations in France, not only on account of the curative properties of its waters, but because of the beauty of the town itself, which is situated at the foot of a range of mountains in Savoy, on the line of intersection between France, Switzerland, and Italy. Its altitude is 768 feet. It forms also the centre of the most pleasant excursions, an account of which is given briefly in a work "Guide aux Villes d'Eaux," lately published by Dr. Macé, one of the principal physicians of the place. The waters, which are thermal, and which are used for drinking and for douching, are partly alkaline and partly sulphurous, with a certain proportion of alum. They are said to be well suited for all cases of rheumatism, gout, and certain diseases of the skin, which, with the two former affections, are comprised under the head of "arthritism," whatever that may be. They are also useful in affections of the throat and bronchial tubes connected with gout and rheumatism, and in the various manifestations of scrofula and syphilis. The bathing establishment is one of the most complete to be seen anywhere, for besides the apparatus for hydrotherapy in all its forms, there are rooms fitted up with spray-producers, inhalers, swimming baths, &c., on a large scale. But the most important feature of the work of the establishment is "massage," which is here carried out to perfection, and renders immense service to those suffering from affections of the joints from whatever cause, paralysis, neuralgia, &c. According to the local physicians, the waters are, however, contra-indicated in phthisis, apoplectic tendencies, and heart affections. From a social point of view, Aix-les-Bains is provided with everything that could be devised to render the sojourn of visitors as pleasant as possible. The atmo-

sphere here struck me as being suited to patients suffering from lung affections, but I was told it was considered too relaxing in July and August, the height of the season, and this accounts for the place being frequented by English visitors only at the commencement and at the end of the season, which lasts from the beginning of May to the end of September, on their way to or from the south. There are two casinos (one too many, in my opinion), but I am not sure whether these would contribute much to the cure of patients who are induced to keep late hours and frequent heated rooms, and thus lose at night what they have gained in the day in the way of health and strength. This reproach may be applied to all the other watering-places. The cholera scare has proved singularly inimical to the interests of Aix-les-Bains, as it was reported that the disease was raging at Aix, which is in Provence, and this was confounded with Aix-les-Bains, which is in Savoy, where not a single case was known to have occurred. But, as might be expected, all the watering-places in France have suffered more or less from the same cause. Within a few minutes' drive from Aix-les-Bains is Marlioz, which may be considered a branch establishment of the former. The composition of its waters, which are cold, is, like those of Aix-les-Bains, partly alkaline and partly sulphurous, and, in addition, they contain iodide and bromide of potassium, which render them useful in catarrhal affections, scrofula, affections of the vocal organs, and the manifestations of syphilis in all its stages, particularly in the tertiary form of the disease. Like those of Aix-les-Bains, the waters of Marlioz are contra-indicated in the advanced stages of pulmonary phthisis. In my next I shall give an account of my visit to Royat, Mont-Dore, La Bourboule, and Vichy.

THE CHOLERA EPIDEMIC.

There is nothing particular to relate respecting the cholera epidemic which is still hanging about Marseilles and Toulon with varying intensity. It has, however, a tendency to spread to the neighbouring provinces, and has already made its appearance in the departments of the Aude, Ardèche, Vaucluse, and Hérault, where several fatal cases have been reported. It is also extending to the Pyrenées Orientales, where, at Perpignan and in the surrounding villages several deaths have occurred. In short, nearly the whole of the littoral of the Mediterranean is affected by the disease, and even Montpellier, which has hitherto escaped, has been brought under its influence, and according to a despatch just received there were reported on the morning of the 17th inst. six deaths as having occurred in that city. The disease seems to have a tendency to extend northwards. Paris, however, still keeps free and healthy. At Puits-le-Bon, a small village in the department of the Yonne, there have been fourteen cases in all since the outbreak of the epidemic, of which seven died. It is remarked that, on official inquiry, it has been ascertained that none of the persons affected had been in communication with the emigrants from the infected parts. There has been rather an aggravation of the reigning epidemic at Marseilles and Toulon within the last few days, the fugitives returning to these places being the principal victims. In sixteen hours there were two deaths from the disease at Toulon, and fourteen at Marseilles in twenty-four hours. Dr. Fauvel, unwilling to admit that he was in error as to his diagnosis of the present epidemic in the south of France, preferred sending in his resignation as Inspector-General of the Sanitary Service throughout the French territory, which has been accepted, and he has been replaced by Dr. Groust.

DEATH OF DR. BURQ.

Dr. Burq, who became famous in connexion with metallotherapy, of which he may be considered the founder, and whose theories as to the efficacy of copper as a preventive and cure for cholera obtained a wide circulation, has just died at Bièvres, in the sixty-third year of his age. Whatever may be the opinion of the profession respecting the peculiar ideas of the deceased as to the action of metals on the economy, no one could contest his good faith and disinterestedness.

Paris, Aug. 19th.

THE BRIGHTON SEWERAGE.—A Local Government inquiry was held on the 8th inst. concerning an application by the Town Council for permission to borrow £25,000, for sewerage works. There was very little opposition, the question of high rating only being raised.

Medical News.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following gentlemen have recently passed the Second Professional Examination of this College:—

Samuel Boake, James H. Bogan, Patrick Bolger, Louis Buggy, J. Casey, Edward A. Cooke, William Colahan, Thomas Connellan, T. H. Corbet, Edward Corcoran, R. H. Cox, W. B. Dick, E. J. Dore, St. Leger John Edmundson, V. E. Fenton, Thomas M. Frood, M. J. Geary, T. A. Goodchild, John Hall, John W. Haughton, R. Hugo, E. Jacob, S. Long, H. Mathews, P. McDermott, J. B. Moore, J. E. Nally, S. H. Newland, J. O'Brien, J. O'Connor, F. G. Donohoe, D. O'Loughlin, R. D. Pennefather, E. M. Power, P. H. Power, F. J. Reid, M. Riordan, W. Ross, T. S. Silles, W. T. Steele, E. Stoker, T. H. Strangman, W. J. Taylor, P. Ternaw, John Toppin, D. W. Turpin, Thomas Williams, T. H. Wilson, W. Woodright, C. S. Woodwright, E. Yates.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 14th:—

Butt, Frank Charles, St. Margarets, Richmond.
Gemmell, John Edward, Queen-street, Waterloo, Liverpool.
Hughes, Samuel, Prince's-road, Liverpool.
Kendall, Henry Wm. Martindale, Renfrew, Bexley-heath.
Priestly, Robert Chambers, Hertford-street, Mayfair.

SIR CHARLES DILKE early in the week paid an official visit of inspection to the small-pox camp and small-pox ships and wharves of the Metropolitan Asylums Board.

THE salary of Mr. C. Gross, F.R.C.S.Eng., the medical superintendent of St. Saviour's Infirmary, Newington, has been increased from £400 to £500 per annum.

THE CANAL BOATS ACT.—It is statad that Sir C. Dilke has decided to appoint Mr. J. Brydone of Edinburgh, and late of Droitwich, to the canal boats inspectorship, under the Act of last session.

FOR the second time within two years Madame Patti, on the 14th inst., gave a grand morning concert in aid of the Swansea Hospital. The receipts amounted to considerably over £1000.

DEATH FROM SWALLOWING GLASS.—A boy recently died at Beckenham from spasm of the glottis, caused by swallowing some glass, a considerable quantity of which was present in a pot of marmalade of which the deceased had partaken.

MULTIPLE BIRTHS.—A woman at Bradpole, Dorset, recently gave birth to three boys; and on the 16th inst. the wife of a labourer at the Carlisle gasworks gave birth to four daughters. The infants in each case are reported to be doing well.

SINGULAR DEATH.—A boy who was recently bathing in the river Medlock, in Manchester, got out of his depth and swallowed some of the water, which was particularly filthy. Though immediately rescued by another lad he expired shortly afterwards, death, it is stated, resulting not from drowning but from poisoning.

ON the 14th inst., whilst Dr. Richardson, of Rhayader, Radnor, was returning home from a professional visit, his horse took fright and ran away, throwing him out of his conveyance and breaking his neck. Deceased, who was sixty-three years of age, had practised in Rhayader for many years.

THE Local Government Board have reversed the decision of the auditor by which nine members of the Milton-next-Sittingbourne Rural Sanitary Authority were surcharged in the sum of £32 odd, being the amount of a certain allowance or abatement, on account of water-supply, they by resolution made to a firm who owned all the cottages in the parish of Murston.

THE STATE OF THE RIVER WEY.—Much excitement has been aroused at Guildford by the fouling of the river Wey and the poisoning of the whole of the fish for miles along its course. The mischief is supposed to have been caused by the refuse from some manufactories on the banks of the river having been allowed to enter the stream. The Guildford Town Council is doubtful how far it can exercise its powers in the matter, but the inhabitants are getting up a petition to the Local Government Board, asking that authority to step in and remedy the existing disgraceful and dangerous state of things.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ALDRED, JOHN CHARLES, L.K.Q.C.P.I., L.F.P.S.Glasg., has been appointed Medical Officer to the Fourth District of the Eccleshall Bierton Union, vice McBeath, resigned.

BENTHALL, WINFRED, M.B. Camb., M.R.C.S., has been appointed Honorary Physician to the Derbyshire General Infirmary.

CARTER, THOMAS EDWARD, M.B.Lond., M.R.C.S., has been appointed Medical Officer to the Stamford District and Workhouse of the Stamford Union.

COLLINS, E. TREACHER, M.R.C.S., L.R.C.P.Lond., L.S.A.Lond., has been appointed House-Surgeon to the Royal London Opththalmic Hospital, Moorfields.

GREAVES, CHAS. AUGUSTUS, M.B.Lond., M.R.C.S., L.S.A.Lond., has been appointed Honorary Physician to the Derbyshire General Infirmary.

GREENSILL, EDW. SAMUEL, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer to the Witley District of the Martley Union.

GREENSILL, JOHN NICHOLAS, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Martley District of the Martley Union.

HALL, THOMAS LAMBERT, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Dilwyn District of the Weobley Union.

JAMIESON, CHARLES, M.B., C.M.Glasg., has been appointed Medical Officer to the Fourth District of the Braintree Union.

JONES, EVAN, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Western District of the Llandilofawr Union.

KNOX, DAVID NELSON, M.B., C.M., F.F.P.S.Glasg., has been appointed Surgeon to the Glasgow Royal Infirmary.

PRINGLE, J. J., M.B., M.R.C.P., has been appointed Assistant-Physician to the Royal Hospital for Diseases of the Chest, City-road, vice C. F. Coxwell, B.A., M.B., resigned.

TURNER, JOHN KEMP, M.B., M.Ch.Aberd., has been appointed Medical Officer to the First District, St. Columb, of the Major Union, vice Fulford, resigned.

WITCHELL, EDWIN AUBREY, M.B., C.M.Univ. Ed., has been appointed House-Surgeon to the Stroud General Hospital.

Births, Marriages, and Deaths.

BIRTHS.

ADAM.—On the 19th inst., at Malling-place, West Malling, Kent, the wife of James Adam, M.D., of a son.

GRANGE.—On the 6th inst., at Mansfield House, Moffat, N.B., the wife of W. D'Oyly Grange, M.D., of a son.

HARE.—On the 1st inst., at Woolwich, the wife of Surgeon-Major George Hare, Army Medical Department, of a son.

HOBSON.—On the 15th inst., at Lower Addiscombe-road, Croydon, the wife of John Morrison Hobson, M.D., of a daughter.

LITHGOW.—On the 14th inst., at Stirling House, Farnborough, Hants, the wife of Dr. T. G. Lithgow, L.R.C.P.Lond., of a son.

SCORESBY-JACKSON.—On the 12th inst., at St. Hilda's, Walthamstow, the wife of Thomas Scoresby-Jackson, M.D., prematurely, of a son (stillborn).

MARRIAGES.

HOLBERTON—TWINING.—On the 11th inst., at the Parish Church, Ballinakill, Henry Nelson Holberton, M.R.C.S. and L.R.C.P., of East Mousley, Surrey, to Julia, fourth daughter of Frederick Twining, Esq., of Cleggan Tower, co. Galway.

RIGDEN—LOVELESS.—On the 12th inst., at St. Nicholas' Church, Brighton, Brian Rigden, M.R.C.S., of Canterbury, to Kate, younger daughter of the late W. Kerr Loveless, M.R.C.S., of Stockbridge, Hants, and Holly Bank, Southsea.

ROSS—WALLIS.—On the 13th inst., at St. Mary's Church, Southampton, Elsey Fairfax Ross, M.D. &c., son of J. Grafton Ross, Esq., of Sydney, to Edith Margaret, second daughter of Thomas Wallis, Esq., of Southampton.

DEATHS.

CUOLAHAN.—On the 20th inst., at 9, Grange-road, Bermondsey, S.E., very suddenly, Hugh Cuolahan, M.D., to the inexpressible grief of his wife and children.

DANIEL.—On the 14th inst., at his residence, Ramsgate, James Stock Daniel, F.R.C.S., aged 80.

JENKINS.—On the 31st ult., at Hawley, Hants, Robert Walker Jenkins, M.R.C.S.Eng., L.S.A.Lond., Medical Officer of Health, New Forest Rural District, formerly of 22, Philpot-lane and 13, Charlotte-street, Bedford-square, London, aged 54. Friends will please accept this (the only) intimation. (Delayed in transmission.)

KEMPTHORNE.—On the 18th inst., John Kempthorne, F.R.C.S., of Callington, Cornwall, aged 62.

LATHAM.—On the 15th inst., at Sandwell House, West Bromwich, Gladys Beverley, only child of George Latham, L.R.C.P., aged 10 months.

MCCULLOUGH.—On the 13th inst., at Wimpole-street, David Moore McCullough, M.D., late Medical Superintendent, Joint Counties Asylum, Abergavenny.

RICHARDSON.—On the 13th inst., through a carriage accident, Richard Richardson, Surgeon, of Bryngwy, Rhayader, Radnorshire, aged 54.

SCRASE.—On the 15th inst., at Lewes, Sussex, George Scrase, M.R.C.S., in his 81st year.

STEEL.—On the 16th inst., at his residence, Southfield, Lewisham, Charles Wilson Steel, M.R.C.S., L.S.A.Lond., aged 73.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.

Essay on the Experiences and Opinions of John Howard on the Preservation and Improvement of the Health of Inmates of Public Institutions. By R. D. R. Sweeting, M.R.C.S. &c. The Howard Prize Essay. pp. 96.

CHURCHILL, J. & A., London.

A Manual of Diseases of the Throat and Nose. By Morell Mackenzie, M.D.Lond. Vol. II.: Diseases of the Œsophagus, Nose, and Naso-pharynx. pp. 574. Illustrated.

On Tumours of the Bladder, their Nature, Symptoms, and Surgical Treatment. By Sir Henry Thompson, F.R.C.S. pp. 111. With Illustrations.

JOHNSTON, W. & A. K., Edinburgh.

A Guide to the Study of Ear Disease. By P. M'Bride, M.D. pp. 198. With Illustrations.

LEWIS, H. K., London.

What to Do in Cases of Poisoning. By William Murrell, M.D., F.R.C.P. Fourth Edition. pp. 212.

Lectures on Mental Disease. By W. H. O. Sankey, M.D.Lond., F.R.C.P. Second Edition. pp. 454. With Illustrations.

NEW SYDENHAM SOCIETY, London.

Atlas of Portraits of Diseases of the Skin. Seventeenth Fasciculus.

RELIGIOUS TRACT SOCIETY, London.

Canadian Pictures, drawn with Pen and Pencil. By the Marquis of Lorne, K.G. pp. 224.

RENSHAW, H., London.

Aix-les-Bains, the Medical Treatment and General Indications. By Dr. Brachet. pp. 174. With Illustrations.

SPON, E. & F. N., London.

A Treatise on the Purification of Coal-gas, and the advantages of Cooper's Coal-liming Process. By R. P. Spice, M.Inst. C. E. pp. 79. With Illustrations.

TRÜBNER & CO., London.

The Principles of Ventilation and Heating, and their Practical Application. By John S. Billings, M.D., LL.D. pp. 216. Illustrated.

Good Words, Sunday Magazine, August.—Scottish Review, July.—Die Zuckerharnruhr; mit einer ausführlichen Diatetik für Zuckerkranke; von Dr. E. Hertzka. (Feller, Karlsbad.)—Poisoning by Canned Goods; by J. G. Johnson, M.D.—Practical Instructions on the Medical and Surgical Uses of Electricity; by S. E. Morrill, M.D., Michigan.—Index Medicus, Vol. VI., No. 6.—Un Viaje a Cerebropolis; pel el Dr. D. Juan Giné y Partagás.—Sanitary Arrangements of Dwelling Houses; by Mark H. Judge, A.R.I.B.A.—Heilung des Schreibkrampfes; von Dr. Wolff.—The Extinction of Small-pox and Diseases of Vaccination by a Practical Process; by W. Hempson Denham.—Addresses delivered at the University of Glasgow at the Opening and Close of the Medical Session; by John Young, M.D.—The Cholera Microbe, and How to Meet it; by Charles Cameron, M.D. (Baillière, Tindall, and Cox.)—Clergyman's Sore-throat and Post-nasal Catarrh; by G. Stoker. (Churchills).—Memoria sulla Cura dell' Ectropio Cicatriziale; pel Dr. R. Castorani. (Piscopo, Napoli.)—Popular Treatise on Consumption; by Wm. Dale, M.D.Lond. (Hodgson, London.)—Picturesque Wales: a Handbook of Scenery accessible from the Cambrian Railways; by Godfrey Turner. (Adams & Sons, Simpkin, Marshall, & Co.)—Lehrbuch der Physiologie, zweite Lieferung; neu Herausgegeben von Dr. A. Gruenhagen. (Voss, Hamburg u. Leipzig.)—The Collective Investigation Record, Vol. II.—International Health Exhibition Handbooks: Cleansing Streets, by W. B. Scott; Salt and other Condiments, by J. J. Manley; Athletics, Part II., by Hon. E. Lyttelton and G. F. Cobb; Schools of Art, by J. C. L. Sparkes.—London Water; by Major-General A. de C. Scott.—Cholera in Cairo, 1883; ricordi del Dr. P. Sonsino.—Observations on the Efficacy of Burning Sulphur Fires in Cholera Epidemics; by Deputy Surgeon-General J. E. Tuson. (Allen, Waterloo-place.)—A Snailway Guide to Tunbridge Wells; by J. Ashby-Sterry.—Alcohol, its Use by Healthy Persons and its Effects on the Skin; by James Startin.—Programa de Patologia Médica; redactado y Seguido por el Dr. D. N. H. y Pascuets. (Jepus, Barcelona.)—Pamphlets by Dr. Moncorvo, Rio de Janeiro: Contribution a l'Etude de la Sclerose multiloculaire chez les Infants; De la Nature de la Coqueluche et de son Traitement par la Résorcine: Da Dilataçao do Estomago nas Creanças e seu Tratamento.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, August 21st, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Aug. 15	30·17	N.W.	63	57	108	79	56	..	Cloudy
,, 16	30·15	W.	64	60	114	80	57	..	Hazy
,, 17	30·26	W.	75	69	122	85	59	..	Bright
,, 18	29·93	W.	69	62	118	83	60	..	Hazy
,, 19	29·92	S.W.	65	60	113	73	56	..	Bright
,, 20	30·06	N.	61	56	107	75	54	·03	Bright
,, 21	30·22	N.E.	66	60	90	75	58	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

SANITATION AT HYÈRES.

DR. DUBRANDY writes to contradict the reports which have recently been circulated regarding the sanitary state of Hyères. Notwithstanding its proximity to Toulon, and the hospitality shown to the fugitives from that ill-fated town, the cholera has, he states, obtained no foothold in Hyères, and the deaths during the first seven months of this year have been less than in the corresponding periods since 1881, in which year they amounted to 203. In 1882 they were 210; in 1883, 222; and in 1884, 199. From January to the end of July in 1883 there were 231 admissions and 59 deaths at the hospital; in the corresponding period of 1884 the admissions were 134 and the deaths 31. Dr. Dubrandy attributes this happy result not only to the efficient system of sanitation which prevails in the place, but also to the admirable situation of the town.

Mr. J. Percival Hunt.—Application to Professor Liveing of Cambridge will no doubt meet with a response.

"THE LONDON UNIVERSITY PRELIMINARY SCIENTIFIC EXAMINATION."

To the Editor of THE LANCET.

SIR,—All medical students should thank Dr. W. H. Stone for his outspoken letter, published in your last issue. Professor G. C. Foster and Professor Reinold have been teachers and examiners for a great many years. Remonstrances have from time to time been made during the period of their examinership, but without effect. It is well known that this Preliminary Scientific Examination has been the bugbear of students going up to the University of London for at least twenty years. Alterations have been made from time to time; but there is no getting away from the pedantry and want of common sense exhibited by the framers of the questions constituting this examination. What is the remedy? In the first place, let the College of Physicians and the College of Surgeons combine, and obtain power to grant the degree of M.D., as suggested by Dr. Hickman; and, secondly, let all teachers who have not the good fortune to be also examiners combine to dissuade all students from going up to the London University at all. I see no other way of avoiding the shameful injustice annually inflicted. There is, I believe, a sort of fiction that the members of the Council revise and sanction the questions set for the examination. But how many of the members of the Council have passed the examination themselves, and would therefore be able to judge of the suitability of the questions propounded? I am, Sir, yours truly,

Aug. 18th, 1884. A READER OF THE LANCET.

Enquirer.—It does not entitle the holder to be registered or to recover charges as a medical man; but he will not be interfered with for practising. He could not, of course, hold public appointments.

THE MEAN TEMPERATURE OF NEW SOUTH WALES.

NEW SOUTH WALES, lying between 29° and 37° of south latitude, is cooler than the corresponding part of Europe. The mean temperature of the southern parts of England is about 52°, and that of France, near Paris, about the same, increasing as one goes south to 58·5° at Marseilles. The mean temperatures in the colony, on the other hand, are: Kiandra, the coldest township, situated on a mountain, 45°; Cooma, on the high land, 52°; Queanbeyan, high land, 53°; Goulburn, high land, 55°; Armidale and New England district, 57°; Mossvale, 55°; Kurrajong, 55°; Orange, 55°. These towns are scattered along the high table-lands from south to north, and represent fairly the climate of a very considerable portion of the whole colony. Next to this in point of temperature is the strip of land between the ocean and the mountains, and which is affected by the cooling sea-breezes. Here there is a mean temperature ranging from 60° at Eden, the most southern port, to 68° at Grafton, one of the northern ports. Sydney, in latitude 34°, has a summer temperature only four degrees warmer than Paris, which is in latitude 49°. Now, the usual difference for a degree in latitude is a degree in temperature; and, therefore, if Sydney were as much warmer than Paris as its latitude alone would lead us to expect, its temperature should be 74°—that is, 15° warmer than Paris, but it is only 4° warmer. This single example is enough to prove the comparative coolness of the coast districts of New South Wales. The investigations made during recent years show that the mean temperature of the whole colony, as derived from forty-five stations scattered over it, is 59·5°, three degrees lower than that of Sydney, or only one degree hotter than that of Paris. It may be mentioned that the highest shade temperature ever recorded in Sydney was 106·9°, and near Paris a temperature of 106·5° has been recorded.

Hospital Student.—The list of prize winners at the various hospital schools will, in accordance with our custom, be published in our Student's Number, to be issued on Sept. 13th.

WOODEN HOSPITALS FOR INFECTIOUS CASES.

To the Editor of THE LANCET.

SIR,—I should consider it a favour if you could give me any information about temporary wooden hospitals for infectious cases. I am attending a case of small-pox (imported from Liverpool) at Bangor Isycoed, a village about three miles from here, and there is no hospital for infectious cases in Wrexham, the nearest town to send the patient to. Are there any small wooden buildings for three or four beds to be had on hire in London or Liverpool, as there is no place to send small-pox cases to if it should spread in the village; or are there any tents to be had on hire? I should be glad if you could give me the name of any firm to whom I could apply. I am, Sir, yours truly,

Overton, Ruabon, Aug. 18th, 1884. J. T. GOBAT.

*** We do not believe that any such wooden hospitals are kept in readiness, and previous experience does not favour their erection in the face of an actual outbreak. Tents may be procured by purchase for some six or eight patients from Messrs. Piggott Bros., 59, Bishopsgate Without, E.C., but we believe they are not hired. Doecker huts may also be obtained, but these have to be sent from Denmark. Under the circumstances, a hospital marquee tent seems most applicable; but otherwise it will be well to trust to vaccination, and at once to commence the erection of a permanent hospital, which would in the future be in actual readiness to meet emergencies of this sort. Even for a tent, a site, means of drainage, nurses' accommodation, &c., must be provided, and at best the plan will be a makeshift.—ED. L.

Subscriber.—We think our correspondent has no redress, as he, at least tacitly, accepted the terms of the guardians.

BORACIC ACID IN CHOLERA.

To the Editor of THE LANCET.

SIR,—Dr. Peyrusson advocates in a French medical contemporary (*Lyon Méd.*, No. 31) the internal administration of boracic acid in Asiatic cholera. He appears to believe that a large dose of thirty grains, while it would not produce any toxæmic effects because of the absorption by the mucous membrane of the alimentary tract being retarded and prevented in the disease, would destroy the bacilli. Having in view Koch's latest researches, it would, I venture to think, seem a trifle out of date to entertain any such view, so far as our knowledge at present goes. According to the illustrious German *savant*, the amount of carbolic (and indeed any other) acid that would be efficacious in destroying his comma-shaped bacilli would, *ceteris paribus*, also kill the patient, if administered therapeutically. Mention may here be made, *en passant*, of the fact that boracic acid has been tried by our Indian medical officers; and the present writer is inclined to think that Dr. Bonstead (Transactions of the Bombay Medical and Physical Society) was one of them. It may also be noted that in 1878 Dr. Butler published a paper in your columns treating on the same subject. I am, Sir, yours truly,

London, Aug. 16th, 1884. JOHN C. LUCAS.

BEVERAGES IN METALLIC VESSELS.

AT the suggestion of Dr. Cyrus Edson, of the Health Department, says the *Boston Medical and Surgical Journal*, an ordinance has been passed forbidding the use of vessels made of brass, lead, copper, or other metallic substance, in the sale of beer, soda-water, syrups, and other beverages or flavouring materials, on account of the danger of the formation of compounds detrimental to health. An investigation into the character of the lining of the soda-water fountains of Brooklyn is at present being made by Health Commissioner Raymond.

THE IRISH BRANCH COUNCIL AND ERASURE OF NAMES.

To the Editor of THE LANCET.

SIR,—I very frequently receive a circular from the Irish Branch Medical Council, marked "Second application prior to erasure," inquiring if I had changed my address &c., never having received the previous application. I received a similar communication at the end of last September awaiting me on my return from Europe, where I had been absent for two months. This I immediately replied to, and yet before eight months had elapsed I got another, dated May 12th, 1884, threatening erasure if not answered.

It strikes me the Irish Branch Council is in a great hurry to erase names prematurely from the Register. If all its other duties are discharged with equal zeal and promptitude it is a most efficiently conducted office. The circular gives an extract from the Medical Act 21 and 22 Vict., which provides that it shall be lawful for the registrar to send a letter to any registered person which, if not answered within six months, the name of such person may be erased from the Register.

Now, such communications as I have invariably received from the registrar have been in the form of an open circular. I am not sufficiently versed in legal lore to decide what constitutes a letter, but this I do know, that if a sealed letter is addressed by a person in Great Britain to one in the United States it will be delivered, even though the postage has been insufficiently paid or not paid at all, and double postage collected on delivery, whereas a newspaper or other mail matter below the class of a letter, including circulars, if sufficient postage has not been paid, will not be delivered at all, which probably accounts for my non-receipt of the prior communications referred to.

It is a matter of small moment to me whether my name is erased or not, but there are doubtless others who, after an absence from Great Britain, may return to practise their profession there and find themselves debarred from doing so save at the cost of great inconvenience and worry, owing to a miserable official parsimony in the matter of a penny or two.

May 12th seems rather early in the year to send out a final application.

I am, Sir, yours respectfully,

Ashton, R. I. N. O'D. PARKS, L.K.Q.C.P., &c.

*** The publication of this letter has been unavoidably delayed.—ED. L.

"IS DEAFNESS A BARRIER TO PRACTICE?"

To the Editor of THE LANCET.

SIR,—My late father was in practice upwards of fifty years in one place, and brought up six children without any other aid. During this time he was deaf. These are the words of his sister-in-law to me: "Your father never seemed to be at any loss with his patients." I hope his case may prove of some comfort in that of a "Constant Reader."

I am, Sir, yours faithfully,

Kennington-park-road, Aug. 17th, 1884. C. CORBETT BLADES.

To the Editor of THE LANCET.

SIR,—Allow me to suggest to your correspondent "Constant Reader" the advisability of learning "lip reading." Aided by developed seeing-power, he would undoubtedly be able to carry on his practice; and I shall be glad to make an appointment with him to explain the system, and to show its practicability.—I am, Sir, yours truly,

WILLIAM VAN PRAAGH.

School and Training College for Teachers of the Association for the Oral Instruction of the Deaf and Dumb, 11, Fitzroy-square, W., Aug. 19th, 1884.

Mac.—An application for a fee of, say, £2 2s., accompanied by a letter explanatory of the delicacy of the operation, would probably meet with a satisfactory response from the guardians. We should be glad to be informed of the result.

"PREVENTION OF 'HARVEST BUMPS.'"

To the Editor of THE LANCET.

SIR,—Pardon my asking if you think that the letter signed "C. S. Taylor," on the above-named subject, was seriously meant, or whether it was not sent by mistake to you instead of to the Editor of *Fun*? Does the writer believe that a family going for a holiday to the seaside would be provided with all the means and appliances that are suggested therein—means more troublesome than even the irritation of harvest bugs—the antidote worse than the bane—measures totally impracticable under the circumstances referred to?

From personal experience, I can say that carbolic soap is useless to prevent the bites. The suggestion of the use of quassia chips (by Mr. Penny) infused in the water used for ablution or baths has everything to recommend it. Sulphur is too offensive, and fumigations too elaborate for lodgers.

I am, Sir, your obedient servant,

Seaton, Devonshire, Aug. 18th, 1884. M.D.

Medicus.—Muscæ volitantes in a large number of cases arise from errors of refraction. Let "Medicus" have his refraction ascertained, and, if necessary, corrected, by a competent authority, and in process of time the muscæ will disappear. If this be not the cause, then the symptom may arise from disorder of the general health, which an intelligent medical friend will discover, and possibly remove.

Dr. Martin.—Next week.

TREATMENT OF SICK HEADACHE.

To the Editor of THE LANCET.

SIR,—There are few diseases of which the most careful outline of diagnosis, prognosis, &c., is not fully detailed in all our standard works, but I regret to say that the question of treatment is often dismissed as of little consequence. I think, therefore, it is worth while briefly to detail the following case, where the treatment was so marked in its success.

Mrs. N——, aged twenty-six, married, two children, had all her adult life suffered to some extent at the periods, and also was troubled with what is commonly called "sick headache." She was treated by various doctors in the Western States of America, and at length she sought the advice of Dr. Thomas of New York. He came to the conclusion that the only possible relief was to be obtained by removal of the ovaries; that she was then much too broken down for the operation; but after a trip to Europe had set up her health he would, on her return, operate. I first saw the patient in June, 1883. She was then in the second day of the period, and under one of her headaches. These begin in one side of the head, and the pain gradually increases until the patient loses consciousness; the limbs become rigid, the hands clenched, the eyes half open and turned up, and shivering fits come on every few minutes. At other times the attack takes the form of spasm of the glottis. Seeing her first in one of her severe attacks, I introduced my hypodermic needle, and injected one-sixth of a grain of morphine. I left the needle in, and in seven seconds relief was obtained; but as it was not complete, at the end of five minutes I gave the same quantity, and withdrew the needle. The pain subsided, and did not return during that period, but the patient suffered from severe sickness, which lasted thirty hours. In a few days I ordered iron and quinine, with shower-baths, good food, and early hours. When the next period was expected, I gave belladonna and bromide of potassium. As soon as the period came on, I kept the patient in bed, applied a blister of the size of half-a-crown over each ovary, and ordered a morphia pessary at night. The period passed over without a sign of pain or trouble. The tonic treatment was resumed, and the patient's health steadily improved. The next period was anticipated a day or two with the belladonna and bromide, and when the flow began, she was kept in bed the first day with half a mustard leaf over each ovary. No pain; period normal. On the next occasion, feeling the restraint irksome, and forgetting the date, the patient went to a theatre on the very night of the return of the period, and at 1 A.M. I was sent for. I injected one-third of a grain of morphia; the relief was instantaneous, and by increasing the dose to half a grain, the sickness diminished. I tried the addition of atropine, but without effect. By persistence in the treatment, essentially the hypodermic, the patient is freed from headache, and no longer looks sick in mind and sick in body, having regained colour in her cheeks. I have repeatedly seen the same good effect in ordinary sick headache, either from hypodermic injection of morphia or from a dose of chlorodyne.

I am, Sir, yours truly,

Glo'ster-road, July, 1884. RICHARD G. JACK, L.K.Q.C.P.I., &c.

THE ILKESTONE "BATHS."

To the Editor of THE LANCET.

SIR,—In your account of home health resorts in THE LANCET of the 9th inst. you mention Ilkestone, near Nottingham. In order to prevent disappointment, I will relate my experience of this place.

Two years ago I spent my autumn vacation in examining some of the English spas, and, attracted by the description in Black's Guide to Derbyshire, I set apart a day to visit Ilkestone. On arriving at that very uninteresting town, I asked for the baths. After several persons had told me that there was nothing of the sort in the place, I was directed to a public-house, and, on inquiring at the bar, found that there had formerly been a bathing establishment attached to the house, but that the baths had been disused for nine or ten years!

I am, Sir, your obedient servant,

Queen Anne-street, Aug. 18th, 1884. F. DE HAVILLAND HALL.

Inquirer.—We do not prescribe. A medical practitioner should be consulted.

"METHOD OF TREATING SPRAINS."

To the Editor of THE LANCET.

SIR,—I am inclined to agree with Dr. Dinin that the efficacy of Mr. Shearer's method of treating sprains lies solely in the compression. The principle of firm, equable pressure is by no means new. For some years it has been practised by Professor Chiene of Edinburgh, who, as far as I know, was the originator of the method. Mr. Chiene's treatment consists in enveloping the parts in a very large quantity of cotton-wool, and then applying firmly an elastic bandage.

I am, Sir, yours obediently,

J. CHALMERS ROBERTSON, M.B., C.M.

Glenkillin, Blairgowrie, Aug. 19th, 1884.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. A. T. Harrison, Sherborn; Mr. W. Thomson, Dublin; Dr. Gayton, London; Mr. J. Carter, London; Mr. Arrowsmith, Bristol; Mr. Percival Hunt, London; Dr. Legge; Mr. Kershaw; Dr. Reed, Montreal; Dr. Armstrong, Newcastle-on-Tyne; Dr. Philipson, Newcastle-on-Tyne; Mr. H. A. Reeves, London; Mr. Maitland, Madras; Mr. H. M. Clark, Umritsur; Dr. Corbett Blades, London; Mr. C. MacDowall, London; Mr. Edis, Gloucester; Dr. de Havilland Hall, London; Mr. J. C. Lucas, London; Dr. R. Martin, Ardwick; Dr. Orange, Broadmoor; Mr. A. Nive, Kashmir; Dr. Wigglesworth, Rainhill; Dr. Hope, Liverpool; Mr. B. Walker, Spondon; Dr. O'Hanlan, Spennymoor; Miss Sydney, Brighton; Dr. Fry, Swindon; Mr. Whitmore, Dursley; Messrs. Smith and Sons, Dublin; Mr. Grattan, Cork; Mr. Baker, Newport; Mrs. Stubbury; Messrs. Reynell and Son, London; Mr. Taylor, London; Mr. Gray, Armagh; Mr. Carter, Glasgow; Mr. McVittie; Mr. Hill; Dr. Althaus, London; Dr. Kirk, Glasgow; Dr. Suckling, Birmingham; Mr. de Lisle, Arlesey; Mr. C. Higgens, London; Mr. Van Praagh, London; Mr. Cheese, Exeter; Mr. B. Pitts, London; Dr. Dubrandy, Hyères; Mr. A. W. Green, London; Mr. Farrington; Mr. Turner, Knowle; Mr. Brooks, Hull; Mr. Pratt, Cardiff; Mr. Whitford, London; Mr. le Gland, Cork; Miss Downes, New York; Dr. C. Hewett, London; Messrs. Brown and Son, Douglas; Mr. Turner, Eastbourne; Mr. Johnson, Shrewsbury; Dr. Moncorvo, Rio de Janeiro; Dr. Murray, Stockport; Dr. Chipmell, London; Mr. Buckland, London; Mr. Stevens, London; Mr. Collings, Guernsey; Albuminuria; Sigma; Subscriber; Pro Bono Publico; A Reader of THE LANCET; Horse Doctor; X.; C. D, Brighton; Doctor; J. W. E.; C. D.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Skyros; Mr. Morton, Horncastle; Mr. Packham, Croydon; Mr. Bullock; Mr. Gower, Kingston; Dr. O'Keefe, Bury; Mr. E. Smith; Mr. R. Hogg, London; Messrs. Sidney, London; Mr. Teague, Manchester; Mrs. Nicholas, Great Yarmouth; Mr. Hallan; Mr. Curtice, Exmouth; Dr. Pattinson, Exmouth; Mr. Newton, Liverpool; Mr. Cole, Exeter; Mr. Tay, Aylesbury; Dr. Eberle, Thirsk; Dr. Lennox, Truro; Miss Bucler; Dr. Barr Meadows, London; Dr. Rothers, Notts; Messrs. Trubshaw and Co., Mold; Mr. O'Hanlan, Durham; Messrs. A. and C. Black, Edinburgh; Mr. Pilsbury, Eccleshall; Mr. Cooper, Durham; Mr. Maythorne, Biggleswade; Mr. H. Campbell, London; Mr. Latham, West Bromwich; Mr. Totley, Keighley; Mr. White, Bayswater; Dr. Squire, London; Mrs. Moon, S. Kensington; Mr. Howse, London; Mr. Dalrymple, Leicester; Mrs. Busby, Gravesend; Mr. Honshin, Stepney; Dr. Bubash, Glasgow; Mr. Richardson; Mr. Hughes, Holyhead; Dr. Linnard, Arbroath; Mr. Jenkins; Mr. Haywood, Manchester; Messrs. Byles and Son, Bradford; Messrs. Fowke and Co., Stratford; Mr. Jacobs, Culwell; Mr. Hollins, Tamworth; Messrs. Giles and Co.; J. D., Ryde; Royal Cornwall Infirmary; Medicus, Dewsbury; X. Y. Z., Lifford; R. W.; J. M. G.; C. M., Huddersfield; M.R.C.S., Barnsley; M.D., Bolton; H. B. M., Clapham; Medicus, Islington; Medicus, Sheffield; A. K. M., Harwich; Domus; Lady Superintendent, Liverpool; H.; Medicus, Stow-on-the-Wold; M.D., Shepherd's Bush; Medicus, Turnham-green; Rusticus; J. P., Camberwell; S. J.; Alpha, Southminster; Alpha, Manchester; W. M.; F.R.G.S.; Medicus, Alby-church; Licentiate, Barnet; A. D., Egremont; L. M. N.; D. W., Cavendish-square; A. G.

Glasgow Herald, Manchester Guardian, Liverpool Courier, Toronto Globe, Liverpool Evening Express, East Anglican Daily Times, Liverpool Echo, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, August 26.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, August 27.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, August 28.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday August, 29.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, August 30.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year..... £1 12 6 | Six Months..... £0 16 3
To CHINA AND INDIA..... One Year 1 16 16
To THE COLONIES AND UNITED STATES .. Ditto 1 14 8

Post Office Orders should be addressed to JOHN CROFT, THE LANCET Office, 423, Strand, London, and made payable at the Post Office, Charing-cross.

Notices of Births, Marriages, and Deaths are charged five shillings.

Cheques to be crossed "London and Westminster Bank."

ADVERTISING.

Books and Publications .. .. — — ..	£2	5 0
Official and General Announcements .. .. —	0	5 0
Trade and Miscellaneous Advertisements	0	4 6
Seven lines and under (each averaging ten words).		
Every additional Line	0	0 6
Front Page .. .. .. — .. per Line	0	1 0
Quarter Page .. .. .. —	1	10 0
Half a Page .. .. .. — — ..	2	15 0
An entire Page .. .. .. — — ..	5	5 0

The Publisher cannot hold himself responsible for the return of testimonials, &c., sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom, and all other Advertising Agents.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

BEST COPY AVAI